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December 13, 2007

**CERTIFIED MAIL**

James I. Palmer, Regional Administrator  
USEPA Region 4  
Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA 30303-8909

**Re: South Carolina Air Quality Implementation Plan Revision  
110(a)(1) Maintenance Plan for Cherokee County, South Carolina**

Dear Mr. Palmer:

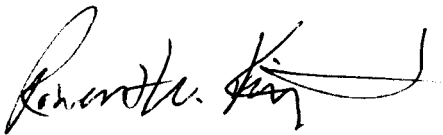
On April 30, 2004 (69 FR 23858), the Environmental Protection Agency (EPA) designated and classified areas for the 8-hour ground-level ozone National Ambient Air Quality Standard (NAAQS). For most areas, these designations became effective June 15, 2004. Also on April 30, 2004 (69 FR 23951), the EPA published the final Phase 1 rule for implementation of the eight-hour ozone NAAQS. Sections 51.905(c) and (d) of 40 CFR Part 51, Subpart X, established as part of that rulemaking, set forth anti-backsliding requirements for areas designated attainment for the eight-hour standard. These provisions require affected states to submit a ten-year maintenance plan for such areas under Section 110(a)(1) of the Clean Air Act (CAA) if they also were a nonattainment area--or an attainment/unclassifiable area with a section 175A maintenance plan--under the one-hour ozone standard.

Section 110(a)(1) of the CAA requires states to adopt "110(a)(1) maintenance plans" within three years of the promulgation of a NAAQS (under Section 109) for any air pollutant. These plans must provide for the implementation, maintenance, and enforcement of such primary standard for all areas within the state and must be submitted to EPA as a State Implementation Plan (SIP) revision. Cherokee County, South Carolina, previously designated nonattainment for the one-hour ozone primary NAAQS, was designated attainment for the 8-hour ozone primary NAAQS on April 30, 2004. A SIP revision incorporating a 110(a)(1) maintenance plan for Cherokee County was due on April 30, 2007. On August 16, 2007, the South Carolina Department of Health and Environmental Control (the Department) informed the EPA of its intent to complete and submit this required plan.

Enclosed with this letter is a copy South Carolina's proposed 110(a)(1) maintenance plan for Cherokee County for the 8-hour ozone primary NAAQS. Three additional copies of the plan, along with an electronic version, are also enclosed. The plan, which constitutes a SIP revision, includes an attainment inventory, a maintenance demonstration, ambient air quality monitoring data, verification of continued attainment, contingency measures, and conformity provisions. A staff-led public hearing to discuss this plan was held on November 27, 2007. There were no attendees and no comments were received regarding this plan. The Department requests final approval from EPA on the revision to the South Carolina SIP.

The Department appreciates the assistance provided by you and your staff regarding the formulation of this plan. Should you or your staff have any questions or comments concerning this SIP revision, please contact Stacey Gardner of my staff at (803) 898-4287 or [gardnesr@dhec.sc.gov](mailto:gardnesr@dhec.sc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Robert W. King, Jr.", with a stylized flourish at the end.

Robert W. King, Jr., P.E.  
Deputy Commissioner  
Environmental Quality Control

cc: Kay Prince, Chief, Air Planning Branch, USEPA Region 4 (w/ attachments)  
Dick Schutt, Chief, Regulatory Development Section, EPA Region IV (w/ attachments)  
Nacosta Ward, Regulatory Development Section, EPA Region IV (w/ attachments)  
Stacey Gardner, Manager, Regulatory Development Section, BAQ (w/attachments)

cc w/out attachments: Myra Reece, Chief, BAQ, SCDHEC

Enclosure - 110(a)(1) Maintenance Plan for Cherokee County, South Carolina

**110(a)(1) Maintenance Plan**

**8-hour Ozone National Ambient Air  
Quality Standard**

**Cherokee County, South Carolina**

Prepared by:



**South Carolina Department of Health and Environmental Control  
Bureau of Air Quality**

December 2007

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# INTRODUCTION

On November 6, 1991, Cherokee County was designated by the United States Environmental Protection Agency (EPA) as a marginal one-hour ozone nonattainment area. This classification was assigned due to multiple exceedances of the National Ambient Air Quality Standard for ozone at the air quality monitor located in the Cowpens National Battle Field in 1988. After three consecutive years of satisfactory air quality data, Cherokee County was redesignated as attainment for the one-hour ozone standard on December 15, 1992. Thereafter, the South Carolina Department of Health and Environmental Control (Department) submitted to EPA a maintenance plan for Cherokee County to ensure continued attainment of the ozone standard. The Department submitted its last required update to the one-hour maintenance plan on January 31, 2002.

On April 30, 2004 (69 FR 23858), the EPA designated and classified areas for the 8-hour ground-level ozone National Ambient Air Quality Standard (NAAQS). For most areas, these designations became effective June 15, 2004. Also on April 30, 2004 (69 FR 23951), the EPA published the final Phase 1 rule for implementation of the 8-hour ozone NAAQS. Sections 51.905(c) and (d) of 40 CFR Part 51, Subpart X, established as part of that rulemaking, set forth anti-backsliding requirements for areas designated attainment for the 8-hour standard. These provisions require affected states to submit a ten-year maintenance plan for such areas under Section 110(a)(1) of the Clean Air Act (CAA) if they also were a nonattainment area--or an attainment/unclassifiable area with a section 175A maintenance plan--under the one-hour ozone standard.

Section 110(a)(1) of the CAA requires states to adopt "110(a)(1) maintenance plans" within three years of the promulgation of a NAAQS (under Section 109) for any air pollutant. Cherokee County, South Carolina, previously designated nonattainment for the one-hour ozone primary NAAQS, was designated attainment for the 8-hour ozone primary NAAQS on April 30, 2004. A State Implementation Plan (SIP) revision incorporating a 110(a)(1) maintenance plan for Cherokee County was due on June 15, 2007.

This revision to the South Carolina SIP satisfies the Department's obligations under Sections 51.905(c) and (d) of 40 CFR Part 51, Subpart X, to provide a 110(a)(1) maintenance plan. This plan consists of an attainment inventory, a maintenance demonstration, ambient air quality monitoring data, contingency measures, verification of continued attainment, and conformity provisions from the base year (2002) until the projection year (2014).

## BACKGROUND AND EMISSIONS SUMMARY

### Types of Inventory, Pollutants, and Source Categories

This Section presents the updated 2002, 2010, 2012, and 2014 emissions budgets for the Cherokee County maintenance area. The budget projections are based on the 2002 base year emissions inventory and address emissions of volatile organic compounds (VOCs), nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO) from stationary point, stationary area, on-road mobile, biogenic, and non-road mobile emission sources.

### Growth Projections

EPA's EGAS model was used to derive growth factors for area source data. These growth factors were used to estimate projected area source emissions. The 2002 emissions inventory was used to develop budgets for stationary point, stationary area, and non-road mobile sources. The budgets for stationary point sources and non-road mobile sources were calculated by applying a one percent (1%) per year industrial growth rate, based on forecasted economic indicators listed in University of South Carolina Moore Business School publications. The individual area and point source emission inventories are included as Attachments A and B, respectively, of this plan. Growth factors were not applied to the biogenic source category, based on the assumption that biogenic emissions do not increase as population increases. The summary of all source categories for 2002, 2010, 2012, and 2014 are listed below in Table 1 by pollutant. On-road mobile source projections are outlined in the On-Road Mobile Source Projections section of this plan.

A triennial assessment will be made of the original growth factors. Growth factors will be based on data published in the South Carolina Statistical Abstracts by the South Carolina Division of Research and Statistics or on other factors that are mutually agreed upon between the Department and EPA Region IV. Further, if the projected inventory actually exceeds the base year inventory by ten percent or more, an annual assessment will be made of the original growth factors to ascertain if additional regulatory revisions are necessary to maintain the current 8-hour ozone standard.

**TABLE 1: EMISSIONS SUMMARY, DAILY AND ANNUAL, PROJECTED FROM 2002 TO 2014**

Pollutant	Tons/Day				Tons/Year			
	2002	2010	2012	2014	2002	2010	2012	2014
VOC	46.61	46.44	46.51	46.63	17014.97	16949.42	16971.83	17018.68
NO <sub>x</sub>	11.21	8.84	8.24	7.77	4095.09	3228.78	3008.4	2838.15
CO	64.75	45.36	43.76	43.08	23,632.05	16,555.80	15,971.15	15,721.12

**TABLE 2: VOC EMISSIONS, DAILY AND ANNUAL, PROJECTED FROM 2002 TO 2014**

VOC Emissions	Tons/Day				Tons/Year			
	2002	2010	2012	2014	2002	2010	2012	2014
Point Sources	1.12	1.21	1.24	1.26	408.93	442.82	451.72	460.80
Area Sources	7.15	8.04	8.25	8.46	2609.97	2934.22	3010.10	3087.92
On-road Mobile Sources	3.10	1.90	1.72	1.60	1131.91	692.96	626.58	582.44
Non-road Mobile Sources	0.50	0.55	0.56	0.57	184.16	199.42	203.43	207.52
Biogenic Sources	34.74	34.74	34.74	34.74	12,680	12,680	12,680	12,680
Total	46.61	46.44	46.51	46.63	17014.97	16949.42	16971.83	17018.68

**TABLE 3: NO<sub>x</sub> EMISSIONS, DAILY AND ANNUAL, PROJECTED FROM 2002 TO 2014**

NO <sub>x</sub> Emissions	Tons/Day				Tons/Year			
	2002	2010	2012	2014	2002	2010	2012	2014
Point Sources	1.43	1.55	1.58	1.61	520.93	564.10	575.44	587.00
Area Sources	0.80	0.85	0.87	0.88	293.58	311.17	316.94	321.65
On-road Mobile Sources	6.82	4.12	3.43	2.87	2490.65	1504.59	1251.60	1049.27
Non-road Mobile Sources	1.95	2.11	2.15	2.20	712.03	771.02	786.52	802.33
Biogenic Sources	0.21	0.21	0.21	0.21	77.9	77.9	77.9	77.9
Total	11.21	8.84	8.24	7.77	4095.09	3228.78	3008.4	2838.15

**TABLE 4: CO EMISSIONS, DAILY AND ANNUAL, PROJECTED FROM 2002 TO 2014**

CO Emissions	Tons/Day				Tons/Year			
	2002	2010	2012	2014	2002	2010	2012	2014
Point Sources	1.02	1.10	1.12	1.15	371.02	401.76	409.84	418.08
Area Sources	7.50	7.73	7.80	7.86	2736.49	2819.92	2847.02	2867.20
On-road Mobile Sources	47.0	26.81	24.99	24.09	17,155.87	9,786.87	9120.00	8793.67
Non-road Mobile Sources	5.91	6.40	6.53	6.66	2156.47	2335.15	2382.09	2429.97
Biogenic Sources	3.32	3.32	3.32	3.32	1212.2	1212.1	1212.2	1212.2
Total	64.75	45.36	43.76	43.08	23,632.05	16,555.80	15,971.15	15,721.12

## ON-ROAD MOBILE SOURCES

### Introduction

The MOBILE6.2 model was run to estimate Cherokee County motor vehicle emission factors for 2002, 2010, 2012, and 2014. Specific emission factors were calculated for VOC, NO<sub>x</sub>, and CO. The model inputs and outputs are listed in Attachment C of this plan. Total Cherokee County on-road mobile source emissions projected for 2002, 2010, 2012, and 2014 are summarized in Table 5.

**TABLE 5: TOTAL ON-ROAD MOBILE SOURCE EMISSIONS FOR CHEROKEE COUNTY**

Pollutant	Tons/Day				Tons/Year			
	2002	2010	2012	2014	2002	2010	2012	2014
VOC	3.10	1.90	1.72	1.60	1131.91	692.96	626.58	582.44
NO <sub>x</sub>	6.82	4.12	3.43	2.87	2490.65	1504.59	1251.60	1049.27
CO	47.0	26.81	24.99	24.09	17,155.87	9,786.87	9120.00	8793.67

### Vehicle Miles Traveled (VMT) Estimates

Vehicle miles traveled in Cherokee County in 2002 were an estimated 696,100,625. Projected VMT for 2010 are 855,342,109; for 2012 are 895,152,645; and for 2014 are 934,962,868. Those projections were obtained from data provided by the South Carolina Department of Transportation (SCDOT).

**TABLE 6: 2002 VMT BY ROAD CLASS FOR CHEROKEE COUNTY (shortened)**

Road Class		Daily VMT (million miles)	Annual VMT (million miles)
Interstate	rural	1.1352	414.3480
	urban	0.0000	0.0000
Principal arterial	rural	0.0443	16.1695
	urban	0.0000	0.0000
Minor arterial	rural	0.2356	85.9940
	urban	0.0998	36.4270
Major collector	rural	0.2830	103.2950
	urban	0.0804	29.3460
Minor collector	rural	0.0289	10.5485
	urban	combined with major collector	

Local	rural	0.0435	15.8775
	urban	0.0254	9.2710
<b>TOTAL</b>		1.9761	721.2765

**TABLE 7: 2010 VMT BY ROAD CLASS FOR CHEROKEE COUNTY**

Road Class		Daily VMT (million miles)	Annual VMT (million miles)
Interstate	rural	1.4471	528.1915
	urban	0.0000	0.0000
Principal arterial	rural	0.0501	18.2865
	urban	0.0000	0.0000
Minor arterial	rural	0.2740	100.0100
	urban	0.1130	41.2450
Major collector	rural	0.3420	124.8300
	urban	0.0820	29.9300
Minor collector	rural	0.0351	12.8115
	urban	combined with major collector	
Local	rural	0.0584	21.316
	urban	0.0290	10.585
<b>TOTAL</b>		2.4308	887.242

**TABLE 8: 2012 VMT BY ROAD CLASS FOR CHEROKEE COUNTY**

Road Class		Daily VMT (million miles)	Annual VMT (million miles)
Interstate	rural	1.5251	556.6615
	urban	0.0000	0.0000
Principal arterial	rural	0.0516	18.8340

	urban	0.0000	0.0000
Minor arterial	rural	0.2836	103.5140
	urban	0.1163	42.4495
Major collector	rural	0.3568	130.2320
	urban	0.0824	30.0760
Minor collector	rural	.03668	13.3882
	urban	combined with major collector	
Local	rural	0.0621	22.6665
	urban	0.0298	10.8770
<b>TOTAL</b>		2.5444	928.7164

**TABLE 9: 2014 VMT BY ROAD CLASS FOR CHEROKEE COUNTY**

Road Class		Daily VMT (million miles)	Annual VMT (million miles)
Interstate	rural	1.603	585.0950
	urban	0.0000	0.0000
Principal arterial	rural	0.0531	19.3815
	urban	0.0000	0.0000
Minor arterial	rural	0.2932	107.0180
	urban	0.1197	43.6905
Major collector	rural	0.3716	135.6340
	urban	0.0828	30.2220
Minor collector	rural	0.0383	13.9795
	urban	combined with major collector	
Local	rural	0.0658	24.0170
	urban	0.0307	11.2055
<b>TOTAL</b>		2.6581	970.2078

## Emission Factor Estimation Procedure

The MOBILE6.2 model was used to develop emission factors for 2002, 2010, 2012, and 2014 on-road mobile sources. Vehicle speed and VMT were provided by SCDOT. Interstate 85 in Cherokee County is located in a rural sector of the county; therefore, no speeds are modeled for the Interstate Urban classification. Although average speeds above 65 mph are listed for the Interstate routes, MOBILE6.2 defaults to a maximum speed of 65 miles per hour (mph) for any calculation that uses a higher speed. Therefore, the emission factors used for the Interstate Rural road classification are for the 65 mph speed. VMT and speeds as provided by SCDOT are given in the table below.

**TABLE 10: SUMMARY OF VMT AND SPEEDS FOR CHERKEE COUNTY**

<b>Functional Class</b>	<b>2002 Adjusted DVMT</b>	<b>2002 Speed</b>
Rural Interstate	1135218	74.9
Rural Princ Arterial	44299	52.9
Rural Minor Arterial	235586	54.6
Rural Major Collector	282958	52.4
Rural Minor Collector	28916	50.0
Rural Local	43483	30.0
<i>Rural Subtotal</i>	1770460	63.8
Urban Interstate	0	0.0
Urban Freeway/Expy	0	0.0
Urban Princ Arterial	0	0.0
Urban Minor Arterial	99753	26.1
Urban Collector	80394	24.7
Urban Local	25446	15.0
<i>Urban Subtotal</i>	205593	23.5
<b>Grand Total</b>	1976053	54.1
<b>Functional Class</b>	<b>2010 Adjusted DVMT</b>	<b>2010 Speed</b>
Rural Interstate	1447101	75.2
Rural Princ Arterial	50139	53.0
Rural Minor Arterial	273975	54.3
Rural Major Collector	342043	52.4
Rural Minor Collector	35124	50.0
Rural Local	58391	30.0
<i>Rural Subtotal</i>	2206773	64.2
Urban Interstate	0	0.0
Urban Freeway/Expy	0	0.0
Urban Princ Arterial	0	0.0
Urban Minor Arterial	113022	26.3
Urban Collector	81999	24.9
Urban Local	28959	15.0

<i>Urban Subtotal</i>	223980	23.5
<b>Grand Total</b>	2430753	55.4
<b>Functional Class</b>	<b>2012 Adjusted DVMT</b>	<b>2012 Speed</b>
Rural Interstate	1525072	75.1
Rural Princ Arterial	51599	53.0
Rural Minor Arterial	283572	54.2
Rural Major Collector	356814	52.4
Rural Minor Collector	36676	50.0
Rural Local	62118	30.0
<i>Rural Subtotal</i>	2315851	64.1
Urban Interstate	0	0.0
Urban Freeway/Expy	0	0.0
Urban Princ Arterial	0	0.0
Urban Minor Arterial	116339	26.3
Urban Collector	82400	24.9
Urban Local	29838	15.0
<i>Urban Subtotal</i>	228577	23.5
<b>Grand Total</b>	2544428	55.5
<b>Functional Class</b>	<b>2014 Adjusted DVMT</b>	<b>2014 Speed</b>
Rural Interstate	1603043	75.0
Rural Princ Arterial	53059	53.0
Rural Minor Arterial	293169	54.1
Rural Major Collector	371585	52.3
Rural Minor Collector	38228	50.0
Rural Local	65845	30.0
<i>Rural Subtotal</i>	2424930	64.1
Urban Interstate	0	0.0
Urban Freeway/Expy	0	0.0
Urban Princ Arterial	0	0.0
Urban Minor Arterial	119656	26.3
Urban Collector	82802	25.0
Urban Local	30716	15.0
<i>Urban Subtotal</i>	233174	23.5
<b>Grand Total</b>	2658103	55.7

The emissions were calculated by multiplying the VOC, NO<sub>x</sub>, and CO composite emission factors for all vehicles (generated by MOBILE6.2) by the daily vehicle miles traveled (DVMT) and a multiplier to convert from grams to tons. This calculation generated the total tons per day (tpd) of VOC, NO<sub>x</sub>, and CO.

MOBILE6.2 input and output files, VMT (by facility) external data files, and calculation spreadsheets are shown in Attachment C of this plan.

Other MOBILE6.2 local input parameters for this conformity determination include no refueling, fuel Reid Vapor Pressure set at 9.0 psi, and minimum/maximum temperatures (66.3 °F / 91.2 °F). Temperatures were obtained from the Douglas International Airport in Charlotte, North Carolina, and minimum / maximum temperatures for the ten highest ozone days for the Cowpens monitor in 2002 were averaged.

## **NON-ROAD MOBILE SOURCES**

Non-highway mobile sources, sometimes referred to as off-road mobile, are those sources that can move but do not use the highway system. The NONROAD2005 model was run to estimate Cherokee County motor vehicle emission factors for 2002, 2010, 2012, and 2014. The NONROAD2005 model predicts emissions for more than 80 basic and 260 specific types of non-road equipment.

The estimation of emissions from mobile sources, like area sources, involves multiplying an activity level by an emission factor. NONROAD2005 reports all emissions as short tons (i.e., 2,000 lbs). The results have been converted to tons/year. The model inputs and outputs are listed in Attachment D of this plan. Total Cherokee County non-road mobile source emissions projected for 2002, 2010, 2012, and 2014 are summarized (as tons/year) in Attachment E of this plan.

## **CHEROKEE COUNTY OZONE ATTAINMENT DEMONSTRATION**

Submittal of three years of quality assured monitoring data with an expected exceedance rate for the ozone standard less than or equal to one percent (1%) per year:

*Monitoring data for 2004, 2005, and 2006 have been quality assured and are currently on file in the Air Quality System (AQS). A copy of this data has been enclosed (Attachment F) to demonstrate compliance with this requirement. The three year design value for this monitor was 0.074 ppm, illustrating that the Cowpens National Battlefield ozone monitor (45-021-0002) shows attainment with the 8-hour ozone NAAQS during this three year period.*

Submittal of a plan requiring retention of any controls on VOC sources which are already in place regardless of whether or not they were mandated by EPA:

*South Carolina implemented a statewide Reasonably Available Control Technology (RACT) program in the early 1980s. This measure was a proactive attempt to improve the air quality, as it was not a Clean Air Act requirement, and this effort will be retained. In addition, South Carolina has PSD standards comparable to the EPA regulations and has delegation of all NSPS. These efforts will also be retained and updated as necessary. 1988 was the last year that the National Ambient Air Quality Standards for ozone were violated in Cherokee County. Since then, more stringent Federal Motor Vehicle Standards have been in place. Additionally, on March 22, 1990, fuel volatility standards were revised to lower the Reid Vapor Pressure (RVP) to 9.0. Subsequent data has shown that Cherokee County attained the NAAQS for ozone with the RVP at 9.0. Therefore, no further adjustment is needed at this time.*

Submittal of a maintenance plan showing attainment for ten years after redesignation which includes emission inventories, a commitment to maintain the existing monitoring system, and contingency measures that will be in effect should the area fail to continue to maintain the ozone standard:

*1990 area, point, and mobile source emissions inventories have been prepared in accordance with the CAAA*

*requirements and were submitted in July 1992. The inventories were updated in July, 1995, April, 1998, January 2002, and with this submittal. It should be noted that because Cherokee County is a substantially rural county, it lacks significant emission sources. With EPA Region IV's assistance, a ten-year emissions projection has been prepared and is enclosed for review. South Carolina also commits to retaining the existing monitoring network in question.*

## **AMBIENT AIR QUALITY MONITORING**

As part of a statewide monitoring network, there is a single ozone monitor located in the rural setting of northwestern Cherokee County at the Cowpens National Battlefield (Cowpens Site) that is dominated by area sources. The site was established as an upwind background monitor on April 21, 1988. The Cowpens Site is located to represent urban scale concentrations of ozone between the Greenville-Spartanburg-Anderson, South Carolina and the Charlotte-Gastonia-Salisbury, North Carolina combined statistical areas (CSAs). The ozone monitor has been designated a State and Local Air Monitoring Station (SLAMS). In addition to ozone, the Cowpens Site also supports a precipitation sampler. The sample inlets are 23 meters from the nearest road.

South Carolina will continue operation of the Cowpens Site ozone monitor, in compliance with 40 CFR Part 58, Ambient Air Quality Surveillance, to verify continued attainment of the 8-hour ozone NAAQS.

## **VERIFICATION OF CONTINUED ATTAINMENT**

The method chosen to verify continued attainment is ambient air quality monitoring. The ambient air monitor at the Cowpens Site will remain active during the entire length of the maintenance plan period (2014) or if relocated or removed, will be done with the EPA's concurrence.

In order to track the progress of the maintenance plan, South Carolina will continue to update its emissions inventory, including Cherokee County, at least once every three years. In addition to the emissions inventory for 2002, the emissions inventory base year, and the last year of the maintenance plan, 2014, interim years of 2010 and 2012 were selected to show a trend analysis for maintenance of the eight-hour ozone NAAQS. Tracking the progress of the maintenance plan also includes performing reviews of the updated emissions inventories for the area using the latest emissions factors, models, and methodologies. For these periodic inventories, the State will review the assumptions made for the purpose of the maintenance demonstration concerning projected growth of activity levels. If any of these assumptions appear to have changed substantially, the State will re-project emissions.

## **ESTABLISHED CONTROL MEASURES**

### **Federal Measures**

- **Tier 2 Vehicle Standards**

Federal Tier 2 vehicle standards will require all passenger vehicles in a manufacturer's fleet, including light-duty trucks and Sport Utility Vehicles (SUVs), to meet an average standard of 0.07 grams of NO<sub>x</sub> per mile. Implementation began in 2004 and should be completely phased in by 2007. The Tier 2 standards will also cover passenger vehicles over 8,500 pounds gross vehicle weight rating (the larger pickup trucks and SUVs), which are not covered by the current Tier 1 regulations. For these vehicles, the standards will be phased in beginning in 2008, with full compliance in 2009. The new standards require vehicles to be 77% to 95% cleaner than those on the road today. The Tier 2 rule also reduced the sulfur content of gasoline to 30 parts per million (ppm) starting in January 2006. Most gasoline sold in South Carolina prior to January 2006 had a

sulfur content of approximately 300 ppm. Sulfur occurs naturally in gasoline but interferes with the operation of catalytic converters on vehicles, resulting in higher NO<sub>x</sub> emissions. Lower-sulfur gasoline is necessary to achieve the Tier 2 vehicle emission standards.

- **Heavy-Duty Gasoline and Diesel Highway Vehicles Standards**

New EPA standards designed to reduce NO<sub>x</sub> and VOC emissions from heavy-duty gasoline and diesel highway vehicles commenced implementation in 2004. A second phase of standards and testing procedures, which began in 2007, is reducing particulate matter from heavy-duty highway engines and has reduced highway diesel fuel sulfur content to 15 ppm. The total program for these new engines using low sulfur diesel is expected to achieve a 90% reduction in particulate matter (PM) emissions and a 95% reduction in NO<sub>x</sub> emissions (as compared to existing engines burning higher-content sulfur diesel).

- **Large Nonroad Diesel Engines Rule**

In May 2004, the EPA promulgated new rules for large non-road diesel engines (such as those used in construction, agricultural, and industrial equipment) to be phased in between 2008 and 2014. The non-road diesel rules also reduce the allowable sulfur in non-road diesel fuel by over 99%. Non-road diesel fuel currently averages approximately 3,400 ppm sulfur. The rule limits non-road diesel sulfur content to 500 ppm in 2006 and 15 ppm in 2010. The combined engine and fuel rules would reduce NO<sub>x</sub> and PM emissions from large non-road diesel engines by over 90% (as compared to current non-road engines using higher content sulfur diesel).

- **Nonroad Spark-Ignition Engines and Recreational Engines Standard**

The new standard, effective in July 2003, regulates NO<sub>x</sub>, HC, and CO for groups of previously unregulated non-road engines. The new standard will apply to all new engines imported into or sold within the United States after these standards begin and will apply to large spark-ignition engines (forklifts and airport ground service equipment), recreational vehicles (off-highway motorcycles and all-terrain vehicles), and recreational marine diesel engines. The regulation varies based upon the type of engine or vehicle.

The large spark-ignition engines contribute to ozone formation and ambient CO and PM levels in urban areas. Tier 1 of this standard was implemented in 2004, and Tier 2 is scheduled to start in 2007. As do large spark-ignition engines, recreational vehicles contribute to ozone formation and ambient CO and PM levels. For all model-year 2006 off-highway motorcycles and all-terrain-vehicles, the new exhaust emissions standard was phased-in at 50%; for model years 2007 and later, the standard will be phased-in at 100%. Recreational marine diesel engines over 37 kilowatts (used in yachts, cruisers, and other types of pleasure craft) contribute to ozone formation and PM levels, especially in marinas. For certain recreational marine diesel engine sizes, the standard began to be phased-in in 2006.

When all of the non-road spark-ignition engines and recreational engines standards are fully implemented, overall reductions of 72% in HC, 80% in NO<sub>x</sub>, and 56% in CO emissions are expected to occur by 2020. These controls will help reduce ambient concentrations of ozone, CO, and fine PM.

- **NO<sub>x</sub> SIP Call in Surrounding States**

In October 1998, the EPA made a finding of significant contribution of NO<sub>x</sub> emissions from certain states and published a rule that set ozone season NO<sub>x</sub> budgets for the purpose of reducing regional transport of ozone (63 FR 57356). This rule, referred to as the NO<sub>x</sub> SIP Call, called for ozone season controls to be put on utility and industrial boilers, as well as internal combustion engines in 22 states in the Eastern United States. A NO<sub>x</sub>

emissions budget was set for each state, and the states were required to develop rules that would allow their respective states to meet their budgets. A NO<sub>x</sub> trading program was established, allowing sources to buy credits to meet their NO<sub>x</sub> budgets as opposed to actually installing controls. The emission budgets were to be met by the beginning of 2004. Even with the trading program, the amount of ozone season NO<sub>x</sub> emissions have decreased significantly in and around North and South Carolina.

- **Clean Air Interstate Rule**

On May 12, 2005, the EPA promulgated the “Rule To Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NO<sub>x</sub> SIP Call,” referred to as CAIR. This rule established the requirement for states to adopt rules limiting the emissions of NO<sub>x</sub> and sulfur dioxide (SO<sub>2</sub>) and established a model rule for the states to use in developing their rules. The purpose of the CAIR is to reduce interstate transport of precursors to fine particulate and ozone. The CAIR applies to: (1) any stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine serving at any time, since the start-up of a unit’s combustion chamber, a generator with nameplate capacity of more than 25 MWe producing electricity for sale; and (2) for a unit that qualifies as a cogeneration unit during the 12-month period starting on the date that the unit first produces electricity and continues to qualify as a cogeneration unit, a cogeneration unit serving at any time a generator with nameplate capacity of more than 25 MWe and supplying in any calendar year more than one-third of the unit’s potential electric output capacity or 219,000 MWh, whichever is greater, to any utility power distribution system for sale. This rule provides annual state caps for NO<sub>x</sub> and SO<sub>2</sub> in two phases, with the Phase I caps for NO<sub>x</sub> and SO<sub>2</sub> starting in 2009 and 2010, respectively. Phase II caps become effective in 2015. The EPA is allowing the caps to be met through a cap and trade program if a state so chooses to participate in the program.

## **State Measures**

- **New Source Review Regulations**

On December 31, 2002, the EPA finalized revisions governing the New Source Review (NSR) program. The major NSR program is a preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants. In areas not meeting health-based NAAQS, the program is referred to as the Prevention of Significant Deterioration (PSD) program. Collectively, these programs are commonly referred to as the major NSR program.

In accordance with EPA’s final rule revisions, state agency programs must adopt and submit revisions to their SIPs to include the minimum program elements outline in the final rules. States may choose to adopt provisions that differ from the final rules; however, to be approvable under the SIP, the state must show that the regulation is at least as stringent as EPA’s amendments.

After a lengthy stakeholder process, the Department submitted revisions to the Legislature in January 2005 to comply with the EPA requirements. The revisions adopted by the Department differ from the federal revisions in several key respects and have the effect of being more stringent than the federal rules. These revisions were approved by the General Assembly and became state-effective upon publication in the *State Register* on June 24, 2005. The final regulations promulgated amendments to regulations R. 61-62.1, *Definitions and General Requirements*, and R. 61-62.5, Standard No. 7, *Prevention of Significant Deterioration*, and also promulgated a new regulation, R. 61-62.5, Standard No. 7.1, *Nonattainment New Source Review*. The EPA is in the process of executing proposed conditional approval of the Department’s submission for the following three regulatory changes:

- **South Carolina Air Pollution Control Regulation R. 61-62, *Definitions and General Requirements*, Section II - Permit Requirements**

This regulation implements a program for the minor new source review permitting program, which enhances the State's prevention of significant deterioration of air quality initiatives.

- **South Carolina Air Pollution Control Regulation R. 61-62.5, Standard No. 7, *Prevention of Significant Deterioration***

This regulation implements a program for the prevention of significant deterioration of air quality for sources located in or whose construction is proposed in an unclassifiable/attainment area of the State.

- **South Carolina Air Pollution Control Regulation R. 61-62.5, No. 7.1 - *Nonattainment New Source Review***

This regulation implements a program whereby sources located in or whose construction is proposed in nonattainment areas that are subject to the requirements of R. 61-62.5, Standard No. 7.1.

- **NO<sub>x</sub> Regulations**

These regulations specify the requirements for controlling NO<sub>x</sub> and for demonstrating compliance with NO<sub>x</sub> limitations and the NO<sub>x</sub> SIP Call.

- **South Carolina Air Pollution Control Regulation R. 61-62.5, Standard No. 2 - *Ambient Air Quality Standards***

This regulation contains the State of South Carolina ambient air quality standards, which have recently been amended to include the 8-hour ozone standards.

- **South Carolina Air Pollution Control Regulation R. 61-62.5, Standard No. 5.2 - *Control of Oxides of Nitrogen (NO<sub>x</sub>)***

This regulation contains the NO<sub>x</sub> control standards applicable to affected stationary sources that emit or have the potential to emit NO<sub>x</sub> generated from fuel combustion.

- **South Carolina Air Pollution Control Regulation R. 61-62.96 - *Nitrogen Oxides (NO<sub>x</sub>) Budget Trading Program***

On October 27, 1998, the EPA finalized a Nitrogen Oxides (NO<sub>x</sub>) State Implementation Plan (SIP) Call Rule.

The NO<sub>x</sub> SIP Call was designed to reduce the regional transport of ground-level ozone through reductions in NO<sub>x</sub> from electric-generating unit (EGU) sources and from some non-EGU sources. The rule requires that, beginning in 2004, NO<sub>x</sub> reductions must occur during ground-level ozone season in states whose NO<sub>x</sub> emissions have been identified as contributing to one-hour ozone standard nonattainment in "downwind" states. The rule also requires states to identify pollution-reduction measures and develop a plan to achieve these reductions.

Each state subject to the NO<sub>x</sub> SIP Call regulation has a NO<sub>x</sub> budget that the state allocates to applicable sources. The budget is based on cost-effective reductions in emissions that can be achieved by the affected sources. South Carolina's state trading program budget, as specified in R. 61-62.96, *Nitrogen Oxides (NO<sub>x</sub>) Budget Trading Program*, is 19,678 tons. The NO<sub>x</sub> SIP Call regulation will be repealed after 2009 upon implementation of the Clean Air Interstate Rule.

- **South Carolina Air Pollution Control Regulation R. 61-62.99 - Nitrogen Oxides Budget Program Requirements for Stationary Sources Not in the Trading Program**

This regulation details requirements for controlling NO<sub>x</sub> emissions from cement manufacturing.

- **South Carolina Air Pollution Control Regulation R. 61-62.2 - Prohibition of Open Burning**

The revision of R. 61-62.2, *Prohibition of Open Burning*, includes a ban of certain open burning during the ozone season for additional control of NO<sub>x</sub> emissions.

- **VOC Regulations: South Carolina Air Pollution Control Regulation R. 61-62.5, Standard No. 5 - Volatile Organic Compounds**

This regulation contains requirements for controlling VOCs.

- **Clean Air Interstate Rule (CAIR)**

On March 10, 2005, the EPA finalized the Clean Air Interstate Rule, also referred to as CAIR. On May 12, 2005, CAIR was published in the *Federal Register*. CAIR affects 28 states and the District of Columbia, whose emissions of sulfur dioxide (SO<sub>2</sub>) and/or NO<sub>x</sub> produced by EGU sources and some non-EGU sources contribute significantly to the nonattainment of the National Ambient Air Quality Standards (NAAQS) for fine particles (PM<sub>2.5</sub>) and/or 8-hour ozone in downwind states. (SO<sub>2</sub> and NO<sub>x</sub> are both precursors to ground-level ozone formation, and NO<sub>x</sub> is also a precursor to PM<sub>2.5</sub> formation.) The EPA has determined that EGU sources in South Carolina are affecting the nonattainment of ozone and PM<sub>2.5</sub> standards in downwind states. CAIR is a cap-and-trade program for NO<sub>x</sub> and SO<sub>2</sub> emissions from affected facilities and has two phases of implementation. The caps for the phases are as follows:

Phase I, which begins in 2009 for NO<sub>x</sub> (annual and ozone season) and in 2010 for SO<sub>2</sub>

CAIR NO<sub>x</sub> annual cap = 32,662 tons (T)

CAIR EGU SO<sub>2</sub> annual cap = 57,271 T

CAIR NO<sub>x</sub> ozone season cap = 15,249 T

Phase II, which begins in 2015 for both pollutants

CAIR NO<sub>x</sub> annual cap = 27,219 T

CAIR EGU SO<sub>2</sub> annual cap = 40,089 T

CAIR NO<sub>x</sub> ozone season cap = 12,707 T

CAIR was due for submission to the EPA for approval on September 11, 2006. South Carolina is one of many states that did not meet this deadline because of a lengthy regulatory process. The Department has worked closely with EPA Region IV toward implementation of the state's rule and has adopted the federal CAIR with modifications in areas where the state has flexibility. A Notice of Drafting was published in the *State Register* on July 22, 2005; a second Notice of Drafting was published in the *State Register* on February 24, 2006. The initial approval to proceed with the proposed regulation was given by the Department's Board on September 14, 2006. The Notice of Proposed Regulation was first published in the *State Register* on October 27, 2006. A public hearing before the Department's Board was held on January 11, 2007. On January 22, 2007, the proposed regulation was submitted to the South Carolina Legislature for approval. On March 8, 2007, the Department submitted a request to EPA Region IV for parallel processing. South Carolina's CAIR was state-effective upon publication in the *State Register* on June 22, 2007. A final state-version of CAIR was submitted to the EPA on August 16, 2007. On October 9, 2007, the EPA published a direct final rule fully

approving portions of the State's version of CAIR and conditionally approving other portions of the State's version of CAIR.

- **Permitting Requirements Involving Emission Offsets NSR - Conditions for Approval** (*Please note that the EPA is currently proposing conditional approval of these provisions, which are found in Regulation 61-62.5, Standard No. 7.1*)

If the Department finds that the major stationary source or major modification would be constructed in an area designated in 40 CFR § 81.341 as nonattainment for a pollutant for which the stationary source or modification is major, approval may be granted only if the following conditions are met:

- The major stationary source or major modification is required to meet an emission limitation that specifies the lowest achievable emission rate (LAER) for such source.
- The applicant must certify that all existing major sources owned or operated by the applicant (or any entity controlling, controlled by, or under common control with the applicant) in the same State as the proposed source are in compliance with all applicable emission limitations and standards under the Clean Air Act (or are in compliance with an expeditious schedule which is Federally-enforceable or contained in a court decree).
- The owner or operator of the proposed new major stationary source or major modification will obtain sufficient emission reductions of the nonattainment pollutant from other sources. Emission reductions shall be in effect and enforceable prior to the date the new source or modification commences operation. The emission reductions shall be obtained in accordance with the following provisions:
  - Where the permitted emissions limit allows greater emissions than the potential to emit of the source, emissions offset credit will be allowed only for control below this potential; and/or
  - For an existing fuel combustion source, credit shall be based on the allowable emissions for the type of fuel being burned at the time the application to construct is filed. If the existing source commits to switch to a cleaner fuel at some future date, emissions offset credit based on the allowable (or actual) emissions for the fuels involved is not acceptable, unless the permit is conditioned to require the use of a specified alternative control measure that would achieve the same degree of emissions reduction should the source switch back to a dirtier fuel at some later date.
  - Emissions reductions achieved by shutting down an existing source or curtailing production or operating hours below baseline levels may be generally credited if such reductions are permanent, quantifiable, federally enforceable, occurred on or after the date of the most recent emissions inventory, and if the area has an EPA-approved attainment plan.
  - Such reductions may be credited if the shutdown or curtailment occurred on or after the date the new source permit application is filed, or, if the applicant can establish that the proposed new source is a replacement for the shutdown or curtailed source, and the cutoff date provision of paragraph (d)(C)(iii)(a) of Standard 7.1 are observed.

- No emissions credit may be allowed for replacing one hydrocarbon compound with another of lesser reactivity, except for those compounds listed in Table 1 of EPA's "Recommended Policy on Control of Volatile Organic Compounds" (42 FR 35314, July 8, 1977).
- All emission reductions claimed as offset credit shall be federally enforceable.
- Location of offsetting emissions. Emission offsets shall be obtained from sources currently operating within the same designated nonattainment area as the new or modified stationary source. Emission offsets may be obtained from another nonattainment area with the Department's approval only if:
  - The other area has an equal or higher nonattainment classification than the area in which the proposed source is located; and
  - Emissions from the other area contribute to a violation of the NAAQS in the nonattainment area in which the source is located.
- Emission offsetting ratios. Emission offsets shall be required in nonattainment areas in accordance with the following provisions:
  - Emissions for carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), lead (Pb), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) nonattainment areas shall be offset at a ratio greater than one to one.
  - Emissions for ozone nonattainment areas shall be offset for volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>) in accordance with the following table:

Designation	Offset ratios
Subpart I	>1 to 1
Marginal	1.1 to 1
Moderate	1.15 to 1
Serious	1.2 to 1
Severe	1.3 to 1
Extreme	1.5 to 1

- Credit for an emissions reduction can be claimed to the extent that the Department has not relied on it in issuing any permit under regulations approved pursuant to 40 CFR Part 51, Subpart I or the Department has not relied on it in demonstrating attainment or reasonable further progress.
- Decreases in actual emissions resulting from the installation of add-on control technology or application of pollution prevention measures that were relied upon in designating an emissions unit as a Clean Unit or a project as a PCP cannot be used as offsets.
- Decreases in actual emissions occurring at a Clean Unit cannot be used as offsets, except as provided in paragraphs (f)(8) and (g)(10) of Regulation 61-62.5, St. No. 7.1. Similarly, decreases in actual emissions occurring at a PCP cannot be used as

offsets, except as provided in paragraph (h)(6)(iv) of Regulation 61-62.5, St. No. 7.1.

- The total tonnage of increased emissions, in tons per year, resulting from a major modification that must be offset in accordance with section 173 of the Clean Air Act shall be determined by summing the difference between the allowable emissions after the modification (as defined by paragraph (b)(3) of Regulation 61-62.5, St. No. 7.1) and the actual emissions before the modification (as defined in paragraph (c)(1) of Regulation 61-62.5, St. No. 7.1) for each emissions unit.
- The emission offsets must provide a positive net air quality benefit in the affected area as determined by 40 CFR 51, Appendix S, Emission Offset Interpretative Ruling.
- Alternative Sites Analysis. An analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source demonstrates that benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification shall be required.

- **Emissions Inventory: South Carolina Regulation R. 61-62.1, *Definitions and General Requirements*, Section III - Emissions Inventory**

This regulation requires the submittal of emissions inventory information by affected sources.

- **Reasonably Available Control Measures (RACM)**

Reasonably Available Control Measures is a broadly defined term referring to technologies and other measures that can be used to control pollution; includes Reasonably Available Control Technology and other measures.

EPA's final 8-hour ozone implementation rule in 40 CFR § 51.912(d), pursuant to Section 172(c)(1) of the CAA, requires the attainment demonstration SIP submittal to include "a SIP revision demonstrating that it has adopted all RACM necessary to demonstrate attainment as expeditiously as practicable and to meet any reasonable further progress (RFP) requirements." In addition, EPA's RACM policy indicates that areas should consider all candidate measures that are potentially available, including any that have been suggested for the particular nonattainment area. Although areas should consider all available measures, areas need only to adopt measures if they are both economically and technologically feasible and will contribute to timely attainment or are necessary to demonstrate (RFP). Measures that might be available but would not advance attainment or contribute to RFP need not be considered as RACM.

- **Early Action Compacts**

On August 22, 2002, DHEC published a Notice of Drafting in the *State Register* announcing its intent to pursue Early Action Compacts (EAC) for the 8-hour ozone standard. Through the EAC process, local, state, and EPA officials commit to working together to develop and implement plans that will reduce ozone pollution so that areas are attaining the 8-hour ozone standard earlier than would be required by the Clean Air Act. Only areas that are attaining the 1-hour ozone standard are eligible to participate in the EAC process. The compact requires these areas to attain the 8-hour ozone standard by December 31, 2007, a date that is sooner than would otherwise be required through the traditional nonattainment designation process.

At the end of 2002, 45 of South Carolina's 46 counties (including Cherokee County), the Department, and EPA Region 4 had signed compacts to implement ozone reduction strategies earlier than federally required. Statewide stakeholder groups involving local and federal governments, industry, environmental groups, and other interested parties have worked together to plan and implement strategies for ozone pollution prevention throughout the state. Plans involve mobile source pollution reduction, outreach actions, and point source prevention, which provide flexibility and foster "homegrown" solutions.

The most important reasons for moving forward in this proactive manner are the public health benefits realized by meeting the new standard sooner than required and also the deferral of the effective date of a nonattainment designation.

As part of this process, the EAC stakeholders developed statewide regulations aimed at achieving additional reductions in ozone precursors. One new regulation that was developed as part of this process was South Carolina Air Pollution Control Regulation R. 61-62.5, Standard 5.2, *Control of Oxides of Nitrogen (NO<sub>x</sub>)*. This is a broad-based regulation that applies statewide to new and existing stationary sources that emit NO<sub>x</sub> from fuel combustion and have not undergone a best available control technology (BACT) analysis for NO<sub>x</sub>. For new sources, the regulation requires the installation of control technology that is based on BACT standards found in the RACT/BACT/LAER clearinghouse. For existing sources, the regulation only applies when a burner is replaced. A low NO<sub>x</sub> burner or equivalent technology capable of achieving a 30 percent reduction from uncontrolled levels will be required as the replacement.

Also, as part of the EAC process, South Carolina Air Pollution Control Regulation R. 61-62.2, *Prohibition of Open Burning*, was revised by deleting the exception for the burning of household trash, revising the exception for the burning of construction waste, and revising the exception for fires set for the purpose of firefighter training. The burning of household trash presents health and environmental concerns for many communities. The smoke generated from these activities is a nuisance to some and a health threat to others with asthma or other respiratory problems. With respect to the exception for the burning of construction waste, the regulation was revised to allow only residential construction waste to be burned outside the ozone season, and this will only be allowed if it meets the provisions of the regulation. Finally, the exception for the purpose of firefighter training was revised to ensure that minimum health, environmental, and safety concerns are addressed.

These regulations were approved by the Department's Board in January 2004, and, in accordance with South Carolina law, they were subsequently submitted to the Legislature for approval. The South Carolina General Assembly approved the regulations, and the rules were published and became effective upon publication in the *State Register* on June 25, 2004. In accordance with the EAC process, the Department incorporated the statewide regulations and the local early action plans into the agency's Early Action SIP revision and submitted it to the EPA in December 2004 for review and approval.

#### ○ **Take a Break from the Exhaust**

Take a Break from the Exhaust (TABFTE) is an alternative commute initiative that uses a competitive model in which points are assigned/awarded for each action that is done to minimize air pollution. A computer program is used by participants to report their actions and to record their daily points. The web-based program is available to state and local government, industry, and the public. The program tracks and calculates vehicle miles, determines emission reductions, is free and requires no additional equipment.

TABFTE was started by the Department's Bureau of Air Quality in 2001 and is still being used by the Bureau staff. In 2003, it was awarded the Governor's Pollution Prevention Award and became Internet accessible.

The program was expanded to other South Carolina State agencies in 2004. The primary benefits of TABFTE are reduced emissions from mobile sources and increased awareness of the impact of mobile sources on air quality; it also encourages participants to take voluntary actions to help improve air quality.

## **CONTINGENCY PLAN**

### **Contingency Plan Triggers**

The primary trigger of the contingency plan will be a violation of the 8-hour ozone NAAQS at the Cowpens Site monitor, or when the three-year average of the fourth-highest values is equal to or greater than the current ozone standard. The trigger date will be 60 days from the date that the State observes a fourth-highest value that, when averaged with the two previous ozone season's fourth highest values, would result in a three-year average equal to or greater than the current ozone standard

The second trigger will apply when the State finds monitored ozone levels indicating that an actual ozone NAAQS violation may be imminent but where no actual violation of the 8-hour ozone standard has occurred. A pattern will be deemed to exist when there are two consecutive ozone seasons in which the fourth-highest values are equal to or greater than the current ozone standard. The trigger date will be 60 days from the date that the State observes a fourth-highest value of equal to or greater than the current ozone standard, following a season in which the fourth-highest value was equal to or greater than the current ozone standard

The third trigger will be an actual increase in ozone precursor emission levels.

### **Contingency Measures**

The contingency measures in the 8-hour ozone maintenance plan for Cherokee County will only be triggered by a violation of the 8-hour ozone NAAQS or by an indication that a violation of the 8-hour ozone NAAQS is imminent.

The contingency measures that can be implemented shall include, but not be limited to, the following:

- RACT for NO<sub>x</sub> and VOC on existing stationary sources;
- Implementation of diesel retrofit programs, including incentives for performing retrofits for fleet vehicle operations;
- Alternative fuel programs for fleet vehicle operations;
- Gas can and lawnmower replacement programs;
- Voluntary engine idling reduction programs;
- Implementation of additional controls in upwind areas; and
- Other measures deemed appropriate at the time as a result of advances in control technologies.

In the event that a violation of the 8-hour ozone standard occurs, the State will, in consultation with EPA Region IV, implement one or more of the contingency measures listed above within a reasonable timeframe after a violation is documented but not longer than 24 months, as suggested by EPA maintenance plan guidance dated May 20, 2005. The specific choice of control measures adopted

will be directly related to the severity of the violation(s).

The following schedule for adoption, implementation, and compliance applies to the contingency measures concerning the option of implementing regulatory requirements:

- Verification of the monitored ozone violation, via the ambient air quality monitor at the Cowpens Site, within 45 days of occurrence;
- Analysis of available data regarding the air quality, meteorology, transport, and related activities in the area to determine the cause of the violation;
- Measure to be selected within three months after verification of a monitored ozone standard violation;
- Develop draft rule for Board approval within ten months of selection of measure; and
- Applicable regulation to be fully implemented by legislative approval within six months to one year of Board approval.

The following schedule for adoption, implementation, and compliance applies to the voluntary contingency measures:

- Verification of the monitored ozone violation, via the ambient air quality monitor at the Cowpens Site, within 45 days of occurrence;
- Analysis of available data regarding the air quality, meteorology, transport, and related activities in the area to determine the cause of the violation;
- Measure to be selected within three months after verification of a monitored ozone standard violation; and
- Initiation of program development with local governments within the area by the start of the following ozone season.

## **CONCLUSION**

The most recent three years of ozone monitoring data for Cherokee County demonstrate compliance with the NAAQS for 8-hour ozone. Since the 1990's, there have been many major programs enacted in South Carolina that have led to significant actual, enforceable emissions reductions, which have led to improvements in the air quality in Cherokee County. Additionally, the maintenance plan demonstrates that the projected total emissions inventories for 2014, the final year of the maintenance plan, as well as the interim years, are all less than the base year total emissions inventory. Therefore, maintenance of the 8-hour ozone NAAQS has also been demonstrated. This maintenance plan has been prepared to meet the requirements of the 1990 Clean Air Act Amendments.

**ATTACHMENT A**  
**AREA SOURCE EMISSIONS OF CO, NO<sub>x</sub> AND VOC**

State County FIPs	SCC	EmissionProcessDescription	Pollutant Code	2002 NEI EMISSION TON/YR	2004 Emissions (tons/yr)	2010 Emissions (tons/yr)	2012 Emissions (Tons/yr)	2014 Emissions (Ton/yr)
45021	2102002000	Industrial Boilers: Bituminous/Subbituminous Coal	CO	2.31	2.1968	2.2167	2.2324	2.2489
45021	2102004000	Industrial Boilers and IC Engines: Distillate Oil	CO	0.79	0.7793	0.8047	0.8331	0.8640
45021	2102005000	Industrial Boilers: Residual Oil	CO	3.02	3.1235	3.0193	3.1473	3.2383
45021	2102006000	Industrial Boilers and IC Engines: Natural Gas	CO	24.82	25.7690	28.9269	29.3049	29.7110
45021	2102011000	Industrial Boilers: Kerosene	CO	0.31498	0.3004	0.2914	0.3052	0.3198
45021	2103002000	Institutional/Commercial Heating: Bituminous and Lignite	CO	0.07	0.0726	0.0734	0.0734	0.0732
45021	2103004000	Institutional/Commercial Heating: Distillate Oil	CO	2.12	2.4038	2.7614	2.8499	2.9353
45021	2103005000	Institutional/Commercial Heating: Residual Oil	CO	0.01	0.0151	0.0159	0.0160	0.0160
45021	2103006000	Institutional/Commercial Heating: Natural Gas	CO	10.73	10.8952	12.9424	13.5686	13.8874
45021	2103007000	Institutional/Commercial Heating: Liquified Petroleum Gas	CO	0.35439	0.3628	0.3784	0.3782	0.3817
45021	2103011000	Institutional/Commercial Heating: Kerosene	CO	0.035761	0.0500	0.0505	0.0503	0.0512
45021	2104002000	Residential Heating: Bituminous and Lignite Coal	CO	22.13	22.7490	21.8161	21.5904	21.2640
45021	2104004000	Residential Heating: Distillate Oil	CO	0.59	0.5916	0.5599	0.5476	0.5304
45021	2104006000	Residential Heating: Natural Gas - All types	CO	7.07	7.5044	8.5686	8.8695	9.0760
45021	2104007000	Residential Heating: Liquified Petroleum Gas	CO	3.5263	3.4245	3.7666	3.8703	3.9572
45021	2104008001	Fireplaces	CO	929.21	928.5614	930.2417	935.3399	935.3380
45021	2104008010	Conventional Woodstoves	CO	453.88	453.5632	454.3839	456.8742	456.8733
45021	2104008030	Catalytic Woodstoves	CO	5.13	5.1264	5.1357	5.1638	5.1638
45021	2104008050	Non-Catalytic Woodstoves	CO	17.16	17.1480	17.1791	17.2732	17.2732
45021	2104011000	Residential Heating: Kerosene	CO	1.4095	2.3517	2.3169	2.2989	2.2614
45021	2302002100	Commercial Cooking	CO	1.3341	1.3643	1.4850	1.5152	1.5393
45021	2302002200	Commercial Cooking	CO	4.2185	4.3139	4.6957	4.7911	4.8675
45021	2302003100	Commercial Cooking	CO	0.33689	0.3445	0.3750	0.3826	0.3887
45021	2610000100	Open Burning - Yard Waste - Leaf Species Unspecified	CO	12.84	13.1358	13.9563	14.2363	14.5377
45021	2610000400	Open Burning - Yard Waste - Brush Species Unspecified	CO	15.82	16.1844	17.1953	17.5404	17.9117
45021	2610000500	Open Burning - Land Clearing Debris	CO	163.44	167.2052	177.6488	181.2140	185.0497
45021	2610030000	Open Burning - Residential, Household Waste	CO	601.94	615.8070	654.2701	667.4005	681.5272
45021	2801500000	Agricultural Field Burning - all crops	CO	7.84	8.3426	9.9910	10.4433	10.8554
45021	2810001000	Open Burning - Forest and Wildfires	CO	81.84	81.8400	81.8400	81.8400	81.8400
45021	2810015000	Prescribed Burning	CO	358.97	358.9700	358.9700	358.9700	358.9700
45021	2810030000	Structure Fires	CO	3.23	3.5089	4.0453	4.0993	4.2449
			CO totals	2736.490421	2758.0053	2819.9220	2847.0200	2867.1963
45021	2102002000	Industrial Boilers: Bituminous/Subbituminous Coal	NO <sub>x</sub>	100.21	95.2994	96.1617	96.8452	97.5598
45021	2102004000	Industrial Boilers and IC Engines: Distillate Oil	NO <sub>x</sub>	3.14	3.0976	3.1986	3.3112	3.4343
45021	2102005000	Industrial Boilers: Residual Oil	NO <sub>x</sub>	33.19	34.3276	33.1821	34.5893	35.5893
45021	2102006000	Industrial Boilers and IC Engines: Natural Gas	NO <sub>x</sub>	29.55	30.6798	34.4396	34.8896	35.3731
45021	2102011000	Industrial Boilers: Kerosene	NO <sub>x</sub>	1.2599	1.2016	1.1657	1.2210	1.2792
45021	2103002000	Institutional/Commercial Heating: Bituminous and Lignite	NO <sub>x</sub>	0.06	0.0622	0.0629	0.0629	0.0627
45021	2103004000	Institutional/Commercial Heating: Distillate Oil	NO <sub>x</sub>	8.49	9.6265	11.0588	11.4130	11.7550

45021	2103005000	Institutional/Commercial Heating: Residual Oil	NO <sub>x</sub>	0.17	0.2568	0.2695	0.2721	0.2728
45021	2103006000	Institutional/Commercial Heating: Natural Gas	NO <sub>x</sub>	12.78	12.9768	15.4151	16.1610	16.5406
45021	2103007000	Institutional/Commercial Heating: Liquefied Petroleum Gas	NO <sub>x</sub>	0.4219	0.4319	0.4504	0.4502	0.4544
45021	2103011000	Institutional/Commercial Heating: Kerosene	NO <sub>x</sub>	0.14305	0.1999	0.2020	0.2014	0.2047
45021	2104004000	Residential Heating: Distillate Oil	NO <sub>x</sub>	2.13	2.1357	2.0214	1.9769	1.9149
45021	2104006000	Residential Heating: Natural Gas - All types	NO <sub>x</sub>	16.62	17.6411	20.1428	20.8501	21.3357
45021	2104007000	Residential Heating: Liquefied Petroleum Gas	NO <sub>x</sub>	8.2868	8.0476	8.8515	9.0953	9.2993
45021	2104008001	Fireplaces	NO <sub>x</sub>	9.57	9.5633	9.5806	9.6331	9.6331
45021	2104008010	Conventional Woodstoves	NO <sub>x</sub>	5.51	5.5062	5.5161	5.5463	5.5463
45021	2104008030	Catalytic Woodstoves	NO <sub>x</sub>	0.1	0.0999	0.1001	0.1007	0.1007
45021	2104011000	Residential Heating: Kerosene	NO <sub>x</sub>	5.0743	8.4661	8.3409	8.2762	8.1412
45021	2610000500	Open Burning - Land Clearing Debris	NO <sub>x</sub>	4.84	4.9515	5.2608	5.3663	5.4799
45021	2610030000	Open Burning - Residential, Household Waste	NO <sub>x</sub>	42.49	43.4689	46.1839	47.1108	48.1079
45021	2810001000	Open Burning - Forest and Wildfires	NO <sub>x</sub>	1.76	1.7600	1.7600	1.7600	1.7600
45021	2810015000	Prescribed Burning	NO <sub>x</sub>	7.7012	7.7012	7.7012	7.7012	7.7012
45021	2810030000	Structure Fires	NO <sub>x</sub>	0.08	0.0869	0.1002	0.1015	0.1051
			NO <sub>x</sub> totals	293.57715	297.5884	311.1658	316.9353	321.6514
45021	2102002000	Industrial Boilers: Bituminous/Subbituminous Coal	VOC	0.32	0.3043	0.3071	0.3093	0.3115
45021	2102004000	Industrial Boilers and IC Engines: Distillate Oil	VOC	0.03	0.0296	0.0306	0.0316	0.0328
45021	2102005000	Industrial Boilers: Residual Oil	VOC	0.17	0.1758	0.1700	0.1772	0.1823
45021	2102006000	Industrial Boilers and IC Engines: Natural Gas	VOC	1.63	1.6923	1.8997	1.9245	1.9512
45021	2102011000	Industrial Boilers: Kerosene	VOC	0.012599	0.0120	0.0117	0.0122	0.0128
45021	2103002000	Institutional/Commercial Heating: Bituminous and Lignite	VOC	0.01	0.0104	0.0105	0.0105	0.0105
45021	2103004000	Institutional/Commercial Heating: Distillate Oil	VOC	0.14	0.1587	0.1824	0.1882	0.1938
45021	2103005000	Institutional/Commercial Heating: Residual Oil	VOC	0	0.0000	0.0000	0.0000	0.0000
45021	2103006000	Institutional/Commercial Heating: Natural Gas	VOC	0.71	0.7209	0.8564	0.8978	0.9189
45021	2103007000	Institutional/Commercial Heating: Liquefied Petroleum Gas	VOC	0.023204	0.0238	0.0248	0.0248	0.0250
45021	2103011000	Institutional/Commercial Heating: Kerosene	VOC	0.0024318	0.0034	0.0034	0.0034	0.0035
45021	2104002000	Residential Heating: Bituminous and Lignite Coal	VOC	2.46	2.5288	2.4251	2.4000	2.3637
45021	2104004000	Residential Heating: Distillate Oil	VOC	0.08	0.0802	0.0759	0.0743	0.0719
45021	2104006000	Residential Heating: Natural Gas - All types	VOC	0.97	1.0296	1.1756	1.2169	1.2452
45021	2104007000	Residential Heating: Liquefied Petroleum Gas	VOC	0.48486	0.4709	0.5179	0.5322	0.5441
45021	2104008001	Fireplaces	VOC	842.4	841.8120	843.3353	847.9572	847.9555
45021	2104008010	Conventional Woodstoves	VOC	104.23	104.1573	104.3457	104.9176	104.9174
45021	2104008030	Catalytic Woodstoves	VOC	0.74	0.7395	0.7408	0.7449	0.7449
45021	2104008050	Non-Catalytic Woodstoves	VOC	1.46	1.4590	1.4616	1.4696	1.4696
45021	2104011000	Residential Heating: Kerosene	VOC	0.19734	0.3292	0.3244	0.3219	0.3166
45021	2301030000	Pharmaceutical Manufacturing	VOC	23.2794	25.4727	36.4775	38.5168	41.0564
45021	2302002100	Commercial Cooking	VOC	0.3995	0.4085	0.4447	0.4537	0.4610
45021	2302002200	Commercial Cooking	VOC	1.2896	1.3188	1.4355	1.4647	1.4880
45021	2302003000	Commercial Cooking	VOC	0.22523	0.2303	0.2507	0.2558	0.2599
45021	2302003100	Commercial Cooking	VOC	0.16314	0.1668	0.1816	0.1853	0.1882

45021	2302003200	Commercial Cooking	VOC	0.0069991	0.0072	0.0078	0.0079	0.0081
45021	2401001000	Surface Coatings: Architectural, all coating types	VOC	83.43	88.5271	107.0383	111.1772	115.1276
45021	2401005000	Autobody Refinishing Paint Application, all solvents	VOC	11.2	11.6720	14.0019	14.8334	15.5152
45021	2401008000	Surface Coatings: Traffic Markings, all coating types	VOC	5.33	5.3073	5.5824	5.5727	5.5662
45021	2401015000	Surface Coatings: Factory-finished Wood, all coating types	VOC	0	0.0000	0.0000	0.0000	0.0000
45021	2401020000	Surface Coatings: Wood Furniture, all coating types	VOC	62.64	65.7477	72.3516	79.2469	86.6277
45021	2401025000	Surface Coatings: Metal Furniture, all coating types	VOC	62.64	65.7477	72.3516	79.2469	86.6277
45021	2401030000	Surface Coatings: Paper, all coating types	VOC	15.39	15.8986	17.5192	18.4756	19.5383
45021	2401050000	Surface Coatings: Miscellaneous Finished Parts	VOC	0	0.0000	0.0000	0.0000	0.0000
45021	2401065000	Surface Coatings: Electronic and Other Electrical, all coating types	VOC	112.76	112.4539	141.1732	143.2519	145.9427
45021	2401070000	Surface Coatings: Motor Vehicles	VOC	0	0.0000	0.0000	0.0000	0.0000
45021	2401090000	Surface Coatings: Miscellaneous Metals Manufacturing	VOC	16.88	19.5254	28.4693	29.7919	31.6185
45021	2401100000	Surface Coatings: Industrial Maintenance, all coating types	VOC	21.7	23.4827	31.4842	33.9280	36.7515
45021	2401200000	Surface Coatings: Other Special Purpose Coatings	VOC	20.25	21.8077	27.0000	28.5577	30.1154
45021	2415120000	Degreasing - Fabricated Metal Products: Open-top, all solvent types	VOC	0.94	0.9926	1.2356	1.3133	1.4017
45021	2415125000	Degreasing - Industrial Machinery & Equip: Open-top, all solvent types	VOC	5.18	6.3561	11.9465	13.3141	14.8809
45021	2415145000	Degreasing - Misc. Manufacturing: Open-top, all solvent types	VOC	14.27	16.2698	22.9110	23.9726	25.4045
45021	2415320000	Degreasing - Fabricated Metal Products: Cold Cleaning, all solvent types	VOC	1.63	1.7212	2.1426	2.2774	2.4306
45021	2415325000	Degreasing - Industrial Machinery & Equip: Cold Clean., all solvent types	VOC	11.9	14.6019	27.4447	30.5865	34.1859
45021	2415345000	Degreasing - Misc. Manufacturing: Cold Cleaning, all types	VOC	32.03	36.5186	51.4253	53.8082	57.0223
45021	2415355000	Degreasing - Automotive Dealers: Cold Cleaning, all solvent types	VOC	14.47	15.0981	17.2986	18.3498	19.3566
45021	2415360000	Degreasing - Auto Repair Services: Cold Cleaning, all solvent types	VOC	60.48	66.0492	90.5639	95.2742	99.9325
45021	2415365000	Degreasing - Misc. Repair Services: Cold Cleaning, all solvent types	VOC	19.38	20.1829	24.0179	25.2734	26.5119
45021	2420010055	Perchloroethylene Dry Cleaning - Commercial/Industrial Cleaners	VOC	13.02	13.0200	13.4192	14.0948	14.7396
45021	2420010370	Special Naphthas Dry Cleaning - Commercial/Industrial	VOC	22.87	22.8700	23.5712	24.7579	25.8906
45021	2420020055	Perchloroethylene Dry Cleaning - Coin-operated Cleaners	VOC	0.64	0.6400	0.6596	0.6928	0.7245
45021	2425000000	Graphic Arts: All types and solvents	VOC	37.12	37.5125	39.3303	41.6025	43.9987
45021	2430000000	Solvent Use on Rubber/Plastics	VOC	11.76	12.5433	15.8347	16.6834	17.6687
45021	2440020000	Industrial Adhesive Application	VOC	92.05	99.6121	133.5541	143.9203	155.8975
45021	2460200000	Consumer and Commercial Products Usage: Household Products, all types	VOC	32.2733	33.0168	35.0790	35.7830	36.5404
45021	2461021000	Asphalt Paving: Cutback	VOC	41.3	43.5356	53.0239	55.7244	58.4083
45021	2461800000	Commercial Pesticide Application - all areas and types	VOC	6.49	6.6395	7.0542	7.1958	7.3481
45021	2465100000	Consumer Products Usage - Personal Care Products	VOC	57.86	59.1929	62.8901	64.1522	65.5101
45021	2465200000	Consumer Products Usage - Household Products	VOC	19.7	20.1538	21.4126	21.8424	22.3047
45021	2465400000	Consumer Products Usage - Automotive Aftermarket Products	VOC	33.92	34.7014	36.8689	37.6088	38.4048
45021	2465600000	Consumer Products Usage - Adhesives and Sealants	VOC	14.21	14.5374	15.4454	15.7553	16.0888
45021	2501050120	Gasoline Distribution - Stage I - Bulk Terminals, Plants, and Pipelines	VOC	105.59	105.1412	110.5906	110.3983	110.2701
45021	2501060050	Gasoline Distribution Stage I - all processes	VOC	146.36	145.7379	153.2914	153.0248	152.8471
45021	2501060100	Gasoline Distribution Stage II - all processes	VOC	141.51	140.9086	148.2118	147.9540	147.7821
45021	2501060201	Underground Storage Tank at Gasoline Service Station: Breathing Losses	VOC	24.26	24.1569	25.4089	25.3647	25.3353
45021	2610000100	Open Burning - Yard Waste - Leaf Species Unspecified	VOC	3.21	3.2839	3.4891	3.5591	3.6344
45021	2610000400	Open Burning - Yard Waste - Brush Species Unspecified	VOC	2.15	2.1995	2.3369	2.3838	2.4343
45021	2610000500	Open Burning - Land Clearing Debris	VOC	11.22	11.4785	12.1954	12.4402	12.7035
45021	2610030000	Open Burning - Residential, Household Waste	VOC	212.45	217.3443	230.9195	235.5538	240.5397
45021	2630020000	Publicly Owned Treatment Works (POTWs)	VOC	3.53	3.5971	3.9528	4.1541	4.3622

45021	2801500000	Agricultural Field Burning - all crops	VOC	1.21	1.2876	1.5420	1.6118	1.6754
45021	2810001000	Open Burning - Forest and Wildfires	VOC	3.85	3.8500	3.8500	3.8500	3.8500
45021	2810015000	Prescribed Burning	VOC	16.893	16.8930	16.8930	16.8930	16.8930
45021	2810030000	Structure Fires	VOC	0.59	0.6410	0.7389	0.7488	0.7754
			VOC totals	2609.970604	2665.7972	2934.2177	3010.1001	3087.9180

**ATTACHMENT B**  
**CHEROKEE COUNTY MAINTENANCE PLAN**  
**POINT SOURCE PROJECTIONS USING 1% GROWTH RATE**

name	state_reg	est_em_02	pollutant	est_em_03	est_em_04	est_em_05	est_em_06	est_em_07	est_em_08	est_em_09	est_em_10	est_em_11	est_em_12	est_em_13	est_em_14	est_em_15
ALCOA HOME EXTERIORS INC	0600-0016	176.28	VOC	178.0428	179.823228	181.6214603	183.437675	185.272052	187.12477	188.99602	190.886	192.79484	194.722788	196.670016	198.6367163	200.6230835
BROAD RIVER ENERGY LLC	0600-0076	134.6561	CO	136.002661	137.3626876	138.7363145	140.123678	141.524914	142.94016	144.369565	145.8133	147.271393	148.744107	150.231548	151.7338639	153.2512025
BROAD RIVER ENERGY LLC	0600-0076	104.7728	NO2	105.820528	106.8787333	107.9475206	109.026996	110.117266	111.21844	112.330623	113.4539	114.588468	115.734353	116.891697	118.0606136	119.2412197
BROAD RIVER ENERGY LLC	0600-0076	3.605484	VOC	3.6415388	3.6779542	3.7147337	3.751881	3.7893998	3.8272938	3.8655667	3.904222	3.9432646	3.9826972	4.0225242	4.0622494	4.1033769
BROWN PACKING COMPANY INC	0600-0031	0.131391	CO	0.1327049	0.1340319	0.1353722	0.1367259	0.1380932	0.1394741	0.1408688	0.142278	0.1437003	0.1451373	0.1465887	0.1480546	0.1495351
BROWN PACKING COMPANY INC	0600-0031	0.513928	NO2	0.5190673	0.524258	0.5295006	0.5347956	0.5401436	0.545545	0.5510005	0.556511	0.5620756	0.5676964	0.5733734	0.5791071	0.5848982
BROWN PACKING COMPANY INC	0600-0031	0.005361	VOC	0.0054146	0.0054687	0.0055234	0.0055786	0.0056344	0.0056907	0.0057476	0.005805	0.0058632	0.0059218	0.005981	0.0060408	0.0061012
CHEROKEE COGENERATION	0600-0060	7.613773	CO	7.6899107	7.7668098	7.8444779	7.9229227	8.0021519	8.0821734	8.1629951	8.244625	8.3270714	8.4103421	8.4944455	8.57939	8.6651839
CHEROKEE COGENERATION	0600-0060	54.4	NO2	55.49344	55.94344	56.0483744	56.6088581	57.1749467	57.746696	58.3241632	58.9074	59.4964788	60.0914436	60.692358	61.2992816	61.9122744
CHEROKEE COGENERATION	0600-0060	4.29605	VOC	4.3390105	4.3824006	4.4262246	4.4704868	4.5151917	4.5603436	4.605947	4.652007	4.6985266	4.7455119	4.792967	4.8408967	4.8893057
CORE MOLDING TECH INC	0600-0068	0.93576	CO	0.9451176	0.9545688	0.9641145	0.9737556	0.9834932	0.9933281	1.0032614	1.013294	1.0234269	1.0336612	1.0439978	1.0544378	1.0649822
CORE MOLDING TECH INC	0600-0068	1.114	NO2	1.12514	1.1363914	1.1477553	1.1592329	1.1708252	1.1825335	1.1943588	1.206302	1.2183654	1.2305491	1.2428546	1.2552831	1.2678359
CORE MOLDING TECH INC	0600-0068	9.75188	VOC	9.8493988	9.9478928	10.0473717	10.1478454	10.2493239	10.351817	10.4553353	10.55989	10.6654876	10.7721425	10.8798639	10.9886625	11.0985491
DUKE ENERGY:MILL CREEK	0600-0081	2.713994	CO	2.7411339	2.7685452	2.7962307	2.824193	2.8524349	2.8809592	2.9097688	2.938867	2.9682552	2.9979378	3.0279172	3.0581964	3.0887784
DUKE ENERGY:MILL CREEK	0600-0081	6.843979	NO2	6.9124188	6.981543	7.0513584	7.121872	7.1930917	7.2650216	7.3376718	7.411049	7.485159	7.5600106	7.6356107	7.7119668	7.7890865
DUKE ENERGY:MILL CREEK	0600-0081	0.098782	VOC	0.0997698	0.1007675	0.1017752	0.102793	0.1038209	0.1048591	0.1059077	0.106967	0.1080365	0.1091169	0.1102081	0.1113102	0.1124233
FREIGHTLINER CUSTOM CHASSIS	0600-0049	1.496	VOC	1.51096	1.5260696	1.5413303	1.5567436	1.572311	1.5880341	1.6039144	1.619954	1.636153	1.6525145	1.6690396	1.68573	1.7025873
HAMRICK MILLS:HAMRICK PLANT	0600-0004	1.165445	CO	1.1770995	1.1888705	1.2007592	1.2127668	1.2248945	1.2371434	1.2495148	1.26201	1.27463	1.2873763	1.3002501	1.3132526	1.3263851
HAMRICK MILLS:HAMRICK PLANT	0600-0004	1.42858	NO2	1.4428658	1.4572945	1.4718674	1.4865861	1.501452	1.5164665	1.5316312	1.546948	1.562417	1.5780412	1.5938216	1.6097598	1.6258574
HAMRICK MILLS:HAMRICK PLANT	0600-0004	0.655936	VOC	0.6624954	0.6691204	0.6758116	0.6825697	0.6893954	0.6962894	0.7032523	0.710285	0.7173876	0.7245615	0.7318071	0.7391252	0.7465165
HAMRICK MILLS:MUSGROVE	0600-0062	1.096685	CO	1.1076519	1.1187284	1.1299157	1.1412149	1.152627	1.1641533	1.1757948	1.187553	1.1994282	1.2114225	1.2235367	1.2357721	1.2481298
HAMRICK MILLS:MUSGROVE	0600-0062	1.3565	NO2	1.370065	1.3837657	1.3976034	1.4115794	1.4256952	1.4399522	1.4543517	1.468895	1.4835842	1.49842	1.5134042	1.5285382	1.5438236
HAMRICK MILLS:MUSGROVE	0600-0062	0.728345	VOC	0.7356285	0.7429848	0.7504146	0.7579187	0.7654979	0.7731529	0.7808844	0.788693	0.7965801	0.8045459	0.8125914	0.8207173	0.8289245
HANSON BRICK BLACKSBURG PLANT	0600-0005	45.00555	CO	45.4556055	45.9101616	46.3692632	46.8329558	47.3012854	47.774298	48.2520413	48.73463	49.2219073	49.7141264	50.2112677	50.7133804	51.2205142
HANSON BRICK BLACKSBURG PLANT	0600-0005	13.35264	NO2	13.4861664	13.6210281	13.7572384	13.8948108	14.0337589	14.174097	14.3158375	14.459	14.6035859	14.7496218	14.897118	15.0460892	15.1965501
HANSON BRICK BLACKSBURG PLANT	0600-0005	1.779621	VOC	1.7974172	1.8153914	1.8335453	1.8518808	1.8703996	1.8891036	1.9079946	1.927075	1.9463452	1.9658087	1.9854668	2.0053215	2.0253747
INDUSTRIAL MINERALS	0600-0039	0.83525	CO	0.8436025	0.8520385	0.8605589	0.8691645	0.8778561	0.8866347	0.895501	0.904456	0.9135006	0.9226356	0.931862	0.9411806	0.9505924
INDUSTRIAL MINERALS	0600-0039	3.341	NO2	3.37441	3.4081541	3.4422356	3.476658	3.5114246	3.5465388	3.5820042	3.617824	3.6540024	3.6905424	3.7274478	3.7647223	3.8023695
INDUSTRIAL MINERALS	0600-0039	0.03341	VOC	0.0337441	0.0340815	0.0344223	0.0347665	0.0351142	0.0354653	0.03582	0.036178	0.03654	0.0369054	0.0372745	0.0376472	0.0380237
LINPAC PAPER	0600-0044	8.148977	CO	8.2304668	8.3127715	8.3958992	8.4798582	8.5646568	8.6503034	8.7368064	8.824175	8.9124162	9.0015404	9.0915558	9.1824714	9.2742961
LINPAC PAPER	0600-0044	15.1213	NO2	15.272513	15.4252381	15.5794905	15.7352854	15.8926383	16.051565	16.2120803	16.3742	16.5379431	16.7033225	16.8703557	17.0390593	17.2094499
LINPAC PAPER	0600-0044	49.4165	VOC	49.910665	50.4097717	50.9138694	51.4230081	51.9372382	52.456611	52.9811767	53.51099	54.0460984	54.5865594	55.132425	55.6837493	56.2405868
MILLIKEN CHEMICAL CYPRESS	0600-0040	0.419	NO2	0.42319	0.4274219	0.4316961	0.4360131	0.4403732	0.4447769	0.4492247	0.453717	0.4582541	0.4628366	0.467465	0.4721397	0.4768611
MILLIKEN CHEMICAL CYPRESS	0600-0040	34.669	VOC	35.01569	35.3658469	35.7195054	36.0767005	36.4374675	36.801842	37.1698606	37.54156	37.9169748	38.2961445	38.6791059	39.065897	39.456556
MILLIKEN MAGNOLIA	0600-0007	133.5599	CO	134.895499	136.244454	137.6068985	138.982968	140.372797	141.77653	143.194291	144.6262	146.072496	147.533221	149.008553	150.4986384	152.0036248
MILLIKEN MAGNOLIA	0600-0007	251.0062	NO2	253.516262	256.0514246	258.6119388	261.198058	263.810039	266.44814	269.112621	271.8037	274.521784	277.267002	280.039672	282.8400688	285.6684695
MILLIKEN MAGNOLIA	0600-0007	103.4576	VOC	104.492176	105.5370978	106.5924688	107.658394	108.734977	109.82233	110.920551	112.0298	113.150054	114.281554	115.42437	116.5786133	117.7443994
NESTLE FROZEN FOODS	0600-0033	23.28269	CO	23.5155169	23.7506721	23.9881788	24.2280606	24.4703412	24.715045	24.962195	25.21182	25.4639352	25.7185746	25.9757603	26.2355179	26.4978731
NESTLE FROZEN FOODS	0600-0033	25.88205	NO2	26.1408705	26.4022792	26.666302	26.932965	27.2022947	27.474318	27.7490608	28.02655	28.3068169	28.5898851	28.875784	29.1645418	29.4561872
NESTLE FROZEN FOODS	0600-0033	0.451191	VOC	0.4557029	0.4602599	0.4648625	0.4695111	0.4742062	0.4789483	0.4837378	0.488575	0.493461	0.4983956	0.5033796	0.5084134	0.5134975
ROMEO RIM INC	0600-0079	10.98771	VOC	11.0975871	11.208563	11.3206486	11.4338551	11.5481937	11.663676	11.7803124	11.89812	12.0170967	12.1372677	12.2586404	12.3812268	12.5050391
SANDERS BROTHERS INC	0600-0052	5.07	VOC	5.1207	5.171907	5.2236261	5.2758624	5.328621	5.3819072	5.4357263	5.490084	5.5449844	5.6004342	5.6564385	5.7130029	5.7701329
SC PIPELINE:BLACKSBURG	0600-0065	2.104043	CO	2.1250834	2.1463342	2.1677975	2.1894755	2.2113703	2.233484	2.2558188	2.278377	2.3011608	2.3241724	2.3474141	2.3708882	2.3945971
SC PIPELINE:BLACKSBURG	0600-0065	8.210896	NO2	8.293005	8.3759351	8.4596945	8.5442914	8.6297343	8.7160316	8.8031919	8.891224	8.980136	9.0699374	9.1606368	9.2522432	9.3447656
SC PIPELINE:BLACKSBURG	0600-0065	0.053835	VOC	0.0543734	0.0549171	0.0554663	0.056021	0.0565812	0.057147	0.0577185	0.058296	0.0588787	0.0594675	0.0600622	0.0606628	0.0612694
SPRINGFIELD LLC:LIMESTONE	0600-0014	2.153392	CO	2.1749259	2.1966752	2.218642	2.2408284	2.2632367	2.2858691	2.3087728	2.331815	2.3551333	2.3786846	2.4024714	2.4264961	2.4507611
SPRINGFIELD LLC:LIMESTONE	0600-0014	3.930817	NO2	3.9701252	4.0098265	4.0499248	4.090424	4.1313282	4.1726415	4.2143679	4.256512	4.2990767	4.3420675	4.3854882	4.4293431	4.4736365
SPRINGFIELD LLC:LIMESTONE	0600-0014	2.963406	VOC	2.9930401	3.0229705	3.0532002	3.0837322	3.1145695	3.1457152	3.1771724	3.208944	3.2410335	3.2734438	3.3061782	3.33924	3.3726324
TIMKEN CO:GAFFNEY BEARING PLANT	0600-0009	6.371408	CO	6.4351221	6.4994733	6.564468	6.6301127	6.6964138	6.7633779	6.8310117	6.899322	6.968315	7.0379982	7.1083782	7.179462	7.2512566
TIMKEN CO:GAFFNEY BEARING PLANT	0600-0009	27.68569	NO2	27.9625469	28.2421724	28.5245941	28.80984	29.0979384	29.388918	29.682807	29.97964	30.2794315	30.5822258	30.8880481	31.1969286	31.5088979
TIMKEN CO:GAFFNEY BEARING PLANT	0600-0009	1.231138	VOC	1.2434494	1.2558839	1.2684427	1.2811271	1.2939384	1.3068778	1.3199466	1.333146	1.3464776	1.3599424	1.3735418	1.3872772	1.40115
WELLSTONE HOLDINGS	0600-0054	1.247192	CO	1.2596639	1.2722605	1.2849831	1.2978329	1.3108112	1.3239193	1.3371585	1.35053	1.3640354	1.3776758	1.3914526	1.4053671	1.4194208
WELLSTONE HOLDINGS	0600-0054	1.55499	NO2	1.5705												

## **ATTACHMENT C**

### **MOBILE6.2 INPUT AND OUTPUT DATA**

## **MOBILE6.2 Input Files**

**\*\*\*\*\*HEADER SECTION\*\*\*\*\***

**\*July 11 2006\***

**MOBILE6 INPUT FILE :  
POLLUTANTS : HC NOX CO  
WITH FIELDNAMES :  
SPREADSHEET :  
RUN DATA :**

**\*\*\*\*\*RUN SECTION #1\*\*\*\*\***

**MIN/MAX TEMP : 66.3 91.2  
FUEL RVP : 9.0  
NO REFUELING :**

**\*\*\*\*\*SCENARIO SECTION #1\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2002 BASELINE - INTERSTATE  
CALENDAR YEAR : 2002  
EVALUATION MONTH : 7  
AVERAGE SPEED : 74.9 FREEWAY**

**\*\*\*\*\*SCENARIO SECTION #2\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2002 BASELINE - RURAL PRINC ART  
CALENDAR YEAR : 2002  
EVALUATION MONTH : 7  
AVERAGE SPEED : 52.9 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #3\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2002 BASELINE - RURAL MINOR ART  
CALENDAR YEAR : 2002  
EVALUATION MONTH : 7  
AVERAGE SPEED : 54.6 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #4\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2002 BASELINE - RURAL MAJ COLL  
CALENDAR YEAR : 2002  
EVALUATION MONTH : 7  
AVERAGE SPEED : 52.4 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #5\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2002 BASELINE - RURAL MINOR COLL  
CALENDAR YEAR : 2002  
EVALUATION MONTH : 7  
AVERAGE SPEED : 50.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #6\*\*\*\*\***

**SCENARIO RECORD : YORK COUNTY 2002 BASELINE - RURAL LOCAL**  
**CALENDAR YEAR : 2002**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 30.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #7\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2002 BASELINE - URBAN MINOR ART**  
**CALENDAR YEAR : 2002**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 26.1 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #8\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2002 BASELINE - URBAN COLL**  
**CALENDAR YEAR : 2002**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 24.7 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #9\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2002 BASELINE - URBAN LOCAL**  
**CALENDAR YEAR : 2002**  
**EVALUATION MONTH : 7**  
**VMT BY FACILITY : FVMT.D**

**\*\*\*\*\*END OF RUN SECTION #1\*\*\*\*\***

**END OF RUN :**

**\*\*\*\*\*RUN SECTION #2\*\*\*\*\***

**MIN/MAX TEMP : 66.3 91.2**  
**FUEL RVP : 9.0**  
**NO REFUELING :**

**\*\*\*\*\*SCENARIO SECTION #1\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2010 - RURAL INTERSTATE**  
**CALENDAR YEAR : 2010**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 75.2 FREEWAY**

**\*\*\*\*\*SCENARIO SECTION #2\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2010 - RURAL PRINC ART**  
**CALENDAR YEAR : 2010**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 53.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #3\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2010 - RURAL MINOR ART**  
**CALENDAR YEAR : 2010**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 54.3 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #4\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2010 - RURAL MAJOR COLL**  
**CALENDAR YEAR : 2010**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 52.4 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #5\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2010 - RURAL MINOR COLL**  
**CALENDAR YEAR : 2010**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 50.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #6\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2010 - RURAL LOCAL**  
**CALENDAR YEAR : 2010**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 30.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #7\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2010 - URBAN MINOR ART**  
**CALENDAR YEAR : 2010**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 26.3 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #8\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2010 - URBAN COLL**  
**CALENDAR YEAR : 2010**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 24.9 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #9\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2010 - URBAN LOCAL**  
**CALENDAR YEAR : 2010**  
**EVALUATION MONTH : 7**  
**VMT BY FACILITY : FVMT.D**

**\*\*\*\*\*END OF RUN SECTION #2\*\*\*\*\***

**END OF RUN :**

**\*\*\*\*\*RUN SECTION #3\*\*\*\*\***

**MIN/MAX TEMP : 66.3 91.2**  
**FUEL RVP : 9.0**  
**NO REFUELING :**

**\*\*\*\*\*SCENARIO SECTION #1\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2012 - RURAL INTERSTATE**  
**CALENDAR YEAR : 2012**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 75.1 FREEWAY**

**\*\*\*\*\*SCENARIO SECTION #2\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2012 - RURAL PRINC ART**  
**CALENDAR YEAR : 2012**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 53.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #3\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2012 - RURAL MINOR ART**  
**CALENDAR YEAR : 2012**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 54.2 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #4\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2012 - RURAL MAJOR COLL**  
**CALENDAR YEAR : 2012**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 52.4 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #5\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2012 - RURAL MINOR COLL**  
**CALENDAR YEAR : 2012**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 50.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #6\*\*\*\*\***

**SCENARIO RECORD : YORK COUNTY 2012 - RURAL LOCAL**  
**CALENDAR YEAR : 2012**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 30.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #7\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2012 - URBAN MINOR ART**  
**CALENDAR YEAR : 2012**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 26.3 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #8\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2012 - URBAN COLLECTOR**  
**CALENDAR YEAR : 2012**  
**EVALUATION MONTH : 7**  
**AVERAGE SPEED : 24.9 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #9\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2012 - URBAN LOCAL**  
**CALENDAR YEAR : 2012**  
**EVALUATION MONTH : 7**  
**VMT BY FACILITY : FVMT.D**

**\*\*\*\*\*END OF RUN SECTION #3\*\*\*\*\***

**END OF RUN :**

**\*\*\*\*\*RUN SECTION #4\*\*\*\*\***

**MIN/MAX TEMP : 66.3 91.2**

**FUEL RVP : 9.0**

**NO REFUELING :**

**\*\*\*\*\*SCENARIO SECTION #1\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2014 - RURAL INTERSTATE**

**CALENDAR YEAR : 2014**

**EVALUATION MONTH : 7**

**AVERAGE SPEED : 75.0 FREEWAY**

**\*\*\*\*\*SCENARIO SECTION #2\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2014 - RURAL PRINC ART**

**CALENDAR YEAR : 2014**

**EVALUATION MONTH : 7**

**AVERAGE SPEED : 53.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #3\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2014 - RURAL MINOR ART**

**CALENDAR YEAR : 2014**

**EVALUATION MONTH : 7**

**AVERAGE SPEED : 54.1 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #4\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2014 - RURAL MAJOR COLL**

**CALENDAR YEAR : 2014**

**EVALUATION MONTH : 7**

**AVERAGE SPEED : 52.3 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #5\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2014 - RURAL MINOR COLL**

**CALENDAR YEAR : 2014**

**EVALUATION MONTH : 7**

**AVERAGE SPEED : 50.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #6\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2014 - RURAL LOCAL**

**CALENDAR YEAR : 2010**

**EVALUATION MONTH : 7**

**AVERAGE SPEED : 30.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #7\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2014 - URBAN MINOR ART**

**CALENDAR YEAR : 2014**

**EVALUATION MONTH : 7**

**AVERAGE SPEED : 26.3 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #8\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2014 - URBAN COLL**

**CALENDAR YEAR : 2014**

**EVALUATION MONTH : 7**

**AVERAGE SPEED : 25.0 ARTERIAL**

**\*\*\*\*\*SCENARIO SECTION #9\*\*\*\*\***

**SCENARIO RECORD : CHEROKEE COUNTY 2014 - URBAN LOCAL**

**CALENDAR YEAR : 2014**

**EVALUATION MONTH : 7**

**VMT BY FACILITY : FVMT.D**

**\*\*\*\*\*END OF RUN SECTION #4\*\*\*\*\***

**END OF RUN :**

## MOBILE6.2 Output Files

Using MOBILE6.2

\*\*\*\*\*

\* MOBILE6.2.03 (24-Sep-2003)

\* Input file: 0607.IN (file 1, run 1).

\*\*\*\*\*

M603 Comment:

User has disabled the calculation of REFUELING emissions.

\* #####

\* CHEROKEE COUNTY 2002 BASELINE

\* File 1, Run 1, Scenario 1.

\* #####

M 96 Warning:

74.9 speed reduced to 65 mph maximum

M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 60.7 miles per hour.

The average speed will be reset to this value.

M582 Warning:

The user supplied freeway average speed of 60.7 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

Calendar Year: 2002

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 279. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh GVWR: <6000 >6000 (All)

Composite Emission Factors (g/mi):

\* #####

\* CHEROKEE COUNTY 2002 BASELINE

\* File 1, Run 1, Scenario 2.

\* #####

The user supplied arterial average speed of 52.9 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

There are no sales for vehicle class HDGV8b

Calendar Year: 2002

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 279. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Composite Emission Factors (g/mi):

Composite VOC :	1.303	1.428	2.296	1.650	1.412	0.584	0.782	0.459	2.27	1.385
Composite CO :	18.97	23.11	33.38	25.74	19.18	1.431	1.398	2.402	9.70	20.313
Composite NOX :	1.202	1.418	1.768	1.508	5.540	1.733	1.789	15.633	1.34	2.690

\* #####  
 \* CHEROKEE COUNTY 2002 BASELINE  
 \* File 1, Run 1, Scenario 3.  
 \* #####

M583 Warning:

The user supplied arterial average speed of 54.6 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

Calendar Year: 2002

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 279. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VMT Distribution:	0.4568	0.3091	0.1063		0.0360	0.0008	0.0017	0.0833	0.0060	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	1.293	1.416	2.277	1.636	1.392	0.580	0.776	0.452	2.27	1.373			
Composite CO :	19.27	23.43	33.71	26.06	19.71	1.438	1.405	2.431	9.70	20.606			
Composite NOX :	1.207	1.426	1.776	1.515	5.601	1.802	1.861	16.197	1.38	2.745			
-----													

\* #####  
 \* CHEROKEE COUNTY 2002 BASELINE  
 \* File 1, Run 1, Scenario 4.  
 \* #####

M583 Warning:

The user supplied arterial average speed of 52.4 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:  
 There are no sales for vehicle class HDGV8b  
 Calendar Year: 2002  
 Month: July  
 Altitude: Low  
 Minimum Temperature: 66.3 (F)  
 Maximum Temperature: 91.2 (F)  
 Absolute Humidity: 75. grains/lb  
 Nominal Fuel RVP: 9.0 psi  
 Weathered RVP: 8.6 psi  
 Fuel Sulfur Content: 279. ppm  
 Exhaust I/M Program: No  
 Evap I/M Program: No  
 ATP Program: No  
 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
VMT Distribution:	0.4568	0.3091	0.1063		0.0360	0.0008	0.0017	0.0833	0.0060	1.0000		
-----												
Composite Emission Factors (g/mi):												
Composite VOC :	1.306	1.431	2.302	1.654	1.418	0.585	0.783	0.461	2.27	1.389		
Composite CO :	18.88	23.02	33.28	25.64	19.01	1.428	1.396	2.393	9.70	20.223		
Composite NOX :	1.200	1.416	1.766	1.505	5.521	1.711	1.767	15.460	1.33	2.673		
-----												

\* #####  
 \* CHEROKEE COUNTY 2002 BASELINE  
 \* File 1, Run 1, Scenario 5.  
 \* #####

M583 Warning:  
 The user supplied arterial average speed of 50.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:  
 There are no sales for vehicle class HDGV8b  
 Calendar Year: 2002  
 Month: July  
 Altitude: Low  
 Minimum Temperature: 66.3 (F)  
 Maximum Temperature: 91.2 (F)  
 Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi  
 Weathered RVP: 8.6 psi  
 Fuel Sulfur Content: 279. ppm  
 Exhaust I/M Program: No  
 Evap I/M Program: No  
 ATP Program: No  
 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VT Distribution:	0.4568	0.3091	0.1063		0.0360	0.0008	0.0017	0.0833	0.0060	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	1.322	1.450	2.333	1.676	1.448	0.591	0.792	0.471	2.27	1.407			
Composite CO :	18.41	22.52	32.77	25.14	18.17	1.417	1.385	2.347	9.70	19.767			
Composite NOX :	1.192	1.404	1.754	1.493	5.426	1.602	1.654	14.583	1.26	2.587			
-----													

\* #####  
 \* YORK COUNTY 2002 BASELINE  
 \* File 1, Run 1, Scenario 6.  
 \* #####

M583 Warning:  
 The user supplied arterial average speed of 30.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:  
 There are no sales for vehicle class HDGV8b  
 Calendar Year: 2002  
 Month: July  
 Altitude: Low  
 Minimum Temperature: 66.3 (F)  
 Maximum Temperature: 91.2 (F)  
 Absolute Humidity: 75. grains/lb  
 Nominal Fuel RVP: 9.0 psi  
 Weathered RVP: 8.6 psi  
 Fuel Sulfur Content: 279. ppm  
 Exhaust I/M Program: No  
 Evap I/M Program: No  
 ATP Program: No  
 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.4568	0.3091	0.1063		0.0360	0.0008	0.0017	0.0833	0.0060	1.0000			

-----

Composite Emission Factors (g/mi):

Composite VOC :	1.546	1.654	2.660	1.911	2.062	0.731	0.977	0.700	2.54	1.650
Composite CO :	15.33	19.20	29.54	21.85	22.20	1.626	1.587	3.181	13.66	17.230
Composite NOX :	1.188	1.368	1.725	1.460	4.671	1.357	1.400	12.603	1.09	2.377

-----

\* #####

\* CHEROKEE COUNTY 2002 BASELINE

\* File 1, Run 1, Scenario 7.

\* #####

M583 Warning:

The user supplied arterial average speed of 26.1 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

Calendar Year: 2002

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 279. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.4568	0.3091	0.1063		0.0360	0.0008	0.0017	0.0833	0.0060	1.0000			

-----

Composite Emission Factors (g/mi):

Composite VOC :	1.628	1.728	2.775	1.996	2.321	0.784	1.047	0.787	2.66	1.740
Composite CO :	15.45	19.27	29.83	21.97	25.62	1.750	1.707	3.678	15.38	17.513
Composite NOX :	1.232	1.409	1.773	1.502	4.530	1.401	1.445	12.954	1.05	2.439

-----

\* #####

\* CHEROKEE COUNTY 2002 BASELINE

\* File 1, Run 1, Scenario 8.

\* #####

M583 Warning:

The user supplied arterial average speed of 24.7 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

Calendar Year: 2002

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 279. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
VMT Distribution:	0.4568	0.3091	0.1063		0.0360	0.0008	0.0017	0.0833	0.0060	1.0000			

-----

Composite Emission Factors (g/mi):

Composite VOC :	1.664	1.762	2.827	2.034	2.434	0.806	1.077	0.824	2.71	1.780
Composite CO :	15.52	19.32	29.98	22.05	27.13	1.804	1.759	3.895	16.12	17.653
Composite NOX :	1.251	1.427	1.794	1.521	4.473	1.421	1.466	13.117	1.03	2.467

-----

\* #####

\* CHEROKEE COUNTY 2002 BASELINE

\* File 1, Run 1, Scenario 9.

\* #####

M 48 Warning:

There are no sales for vehicle class HDGV8b

\*\*\*\*\*

\* MOBILE6.2.03 (24-Sep-2003)

\* Input file: 0607.IN (file 1, run 2).

\*\*\*\*\*

M603 Comment:

User has disabled the calculation of REFUELING emissions.

\* #####

\* CHEROKEE COUNTY 2010

\* File 1, Run 2, Scenario 1.

\* #####

M 96 Warning:

75.2 speed reduced to 65 mph maximum

M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 60.7 miles per hour.

The average speed will be reset to this value.

M582 Warning:

The user supplied freeway average speed of 60.7 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

Calendar Year: 2010

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		

VMT Distribution: 0.3478 0.3890 0.1336 0.0359 0.0003 0.0020 0.0860 0.0054 1.0000

-----  
 Composite Emission Factors (g/mi):

Composite VOC : 0.615 0.658 1.105 0.772 0.658 0.140 0.341 0.258 2.80 0.679

Composite CO : 10.19 11.30 15.30 12.32 9.92 0.813 0.684 1.466 23.81 10.598

Composite NOX : 0.592 0.755 1.142 0.854 2.665 0.642 1.118 10.938 1.62 1.699

-----  
 \* #####

\* CHEROKEE COUNTY 2010

\* File 1, Run 2, Scenario 2.

\* #####

M583 Warning:

The user supplied arterial average speed of 53.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

Calendar Year: 2010

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh GVWR: <6000 >6000 (All)

VMT Distribution: 0.3478 0.3890 0.1336 0.0359 0.0003 0.0020 0.0860 0.0054 1.0000

-----  
 Composite Emission Factors (g/mi):

Composite VOC : 0.633 0.675 1.146 0.796 0.675 0.140 0.343 0.259 2.24 0.696

Composite CO : 9.11 0.27 14.04 11.23 7.01 0.722 0.610 1.176 9.70 9.446

Composite NOX : 0.568 0.721 1.098 0.818 2.504 0.445 0.774 7.179 1.34 1.341

-----  
 \* #####

\* CHEROKEE COUNTY 2010  
 \* File 1, Run 2, Scenario 3.  
 \* #####

M583 Warning:

The user supplied arterial average speed of 54.3 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b  
 Calendar Year: 2010  
 Month: July  
 Altitude: Low  
 Minimum Temperature: 66.3 (F)  
 Maximum Temperature: 91.2 (F)  
 Absolute Humidity: 75. grains/lb  
 Nominal Fuel RVP: 9.0 psi  
 Weathered RVP: 8.6 psi  
 Fuel Sulfur Content: 30. ppm  
 Exhaust I/M Program: No  
 Evap I/M Program: No  
 ATP Program: No  
 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.3478	0.3890	0.1336		0.0359	0.0003	0.0020	0.0860	0.0054	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	0.629	0.671	1.138	0.791	0.668	0.139	0.340	0.257	2.24	0.691			
Composite CO :	9.21	10.37	14.16	11.34	7.16	0.726	0.613	1.187	9.70	9.543			
Composite NOX :	0.570	0.724	1.102	0.821	2.525	0.458	0.799	7.402	1.38	1.363			
-----													

\* #####  
 \* CHEROKEE COUNTY 2010  
 \* File 1, Run 2, Scenario 4.  
 \* #####

M583 Warning:

The user supplied arterial average speed of 52.4 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for

all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

Calendar Year: 2010

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.3478	0.3890	0.1336		0.0359	0.0003	0.0020	0.0860	0.0054	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	0.635	0.677	1.150	0.798	0.678	0.140	0.344	0.261	2.24	0.698			
Composite CO :	9.06	10.22	13.98	11.18	6.93	0.721	0.609	1.171	9.70	9.400			
Composite NOX :	0.567	0.720	1.097	0.816	2.494	0.438	0.763	7.072	1.33	1.330			
-----													

\* #####

\* CHEROKEE COUNTY 2010

\* File 1, Run 2, Scenario 5.

\* #####

M583 Warning:

The user supplied arterial average speed of 50.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

Calendar Year: 2010

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb  
 Nominal Fuel RVP: 9.0 psi  
 Weathered RVP: 8.6 psi  
 Fuel Sulfur Content: 30. ppm  
 Exhaust I/M Program: No  
 Evap I/M Program: No  
 ATP Program: No  
 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VTM Distribution:	0.3478	0.3890	0.1336		0.0359	0.0003	0.0020	0.0860	0.0054	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	0.644	0.685	1.166	0.808	0.691	0.142	0.348	0.267	2.24	0.707			
Composite CO :	8.86	10.02	13.72	10.97	6.63	0.714	0.603	1.149	9.70	9.204			
Composite NOX :	0.563	0.713	1.089	0.810	2.451	0.410	0.714	6.619	1.26	1.284			
-----													

\* #####  
 \* CHEROKEE COUNTY 2010  
 \* File 1, Run 2, Scenario 6.  
 \* #####

#### M583 Warning:

The user supplied arterial average speed of 30.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

#### M 48 Warning:

There are no sales for vehicle class HDGV8b  
 Calendar Year: 2010  
 Month: July  
 Altitude: Low  
 Minimum Temperature: 66.3 (F)  
 Maximum Temperature: 91.2 (F)  
 Absolute Humidity: 75. grains/lb  
 Nominal Fuel RVP: 9.0 psi  
 Weathered RVP: 8.6 psi  
 Fuel Sulfur Content: 30. ppm  
 Exhaust I/M Program: No  
 Evap I/M Program: No  
 ATP Program: No  
 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
VMT Distribution:	0.3478	0.3890	0.1336	0.0359		0.0003	0.0020	0.0860	0.0054	1.0000			

-----

Composite Emission Factors (g/mi):

Composite VOC :	0.755	0.770	1.331	0.913	0.917	0.181	0.442	0.396	2.52	0.821
Composite CO :	7.60	8.73	12.12	9.60	8.10	0.842	0.707	1.557	13.66	8.158
Composite NOX :	0.559	0.694	1.073	0.791	2.110	0.346	0.603	5.598	1.09	1.172

-----

\* #####

\* CHEROKEE COUNTY 2010

\* File 1, Run 2, Scenario 7.

\* #####

M583 Warning:

The user supplied arterial average speed of 26.3 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

Calendar Year: 2010

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

Composite Emission Factors (g/mi):

Composite CO :    7.70      8.83          12.26      9.71      9.27      0.914    0.765      1.786      15.28      8.324

\* #####

\* File 1, Run 2, Scenario 8.

\* #####

The user supplied arterial average speed of 24.9 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

There are no sales for vehicle class HDGV8b

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

VMT Distribution: 0.3478 0.3890 0.1336 0.0359 0.0003 0.0020 0.0860 0.0054 1.0000

Composite Emission Factors (g/mi):

Composite CO :	7.76	8.88	12.33	9.76	9.81	0.946	0.792	1.890	16.01	8.402
----------------	------	------	-------	------	------	-------	-------	-------	-------	-------

Composite NOX :	0.589	0.722	1.113	0.822	2.023	0.362	0.630	5.848	1.03	1.217
-----------------	-------	-------	-------	-------	-------	-------	-------	-------	------	-------

\* #####  
\* CHEROKEE COUNTY 2010  
\* File 1, Run 2, Scenario 9.  
\* #####

M 48 Warning:

There are no sales for vehicle class HDGV8b  
\*\*\*\*\*  
\* MOBILE6.2.03 (24-Sep-2003)  
\* Input file: 0607.IN (file 1, run 3).  
\*\*\*\*\*

M603 Comment:

User has disabled the calculation of REFUELING emissions.

\* #####  
\* CHEROKEE COUNTY 2012  
\* File 1, Run 3, Scenario 1.  
\* #####

M 96 Warning:

75.1 speed reduced to 65 mph maximum

M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 60.7 miles per hour.  
The average speed will be reset to this value.

M582 Warning:

The user supplied freeway average speed of 60.7 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12  
Calendar Year: 2012  
Month: July  
Altitude: Low  
Minimum Temperature: 66.3 (F)  
Maximum Temperature: 91.2 (F)  
Absolute Humidity: 75. grains/lb  
Nominal Fuel RVP: 9.0 psi  
Weathered RVP: 8.6 psi  
Fuel Sulfur Content: 30. ppm  
Exhaust I/M Program: No  
Evap I/M Program: No

ATP Program: No  
Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.3271	0.4043	0.1389		0.0360	0.0003	0.0020	0.0861	0.0054	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	0.511	0.567	0.981	0.673	0.578	0.100	0.278	0.227	2.80	0.589			
Composite CO :	9.06	10.01	13.47	10.90	8.94	0.723	0.580	1.114	23.81	9.428			
Composite NOX :	0.491	0.634	1.025	0.734	2.038	0.415	0.859	8.114	1.62	1.342			
-----													

\* #####  
 \* CHEROKEE COUNTY 2012  
 \* File 1, Run 3, Scenario 2.  
 \* #####

M583 Warning:

The user supplied arterial average speed of 53.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2012

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			

VMT Distribution:    0.3271   0.4043   0.1389                    0.0360   0.0003   0.0020   0.0861   0.0054   1.0000

Composite Emission Factors (g/mi):

Composite VOC :	0.524	0.580	1.014	0.691	0.592	0.100	0.279	0.228	2.24	0.600
-----------------	-------	-------	-------	-------	-------	-------	-------	-------	------	-------

Composite CO :	8.12	9.09	12.33	9.92	6.31	0.641	0.516	0.894	9.70	8.401
----------------	------	------	-------	------	------	-------	-------	-------	------	-------

Composite NOX : 0.471 0.606 0.986 0.704 1.915 0.288 0.595 5.337 1.34 1.073

\* #####

\* CHEROKEE COUNTY 2012

\* File 1, Run 3, Scenario 3.

\* #####

M583 Warning:

The user supplied arterial average speed of 54.2 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2012

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type: LDGV LDGT12 LDGT34 LDGT HDGV LDDV LDDT HDDV MC All Veh GVWR: <6000 >6000 (All)

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All Veh GVWR:

<6000

>6000

(A11)

VMT Distribution: 0.3271 0.4043 0.1389 0.0360 0.0003 0.0020 0.0861 0.0054 1.0000

-----  
 Composite Emission Factors (g/mi):

Composite VOC : 0.521 0.577 1.007 0.687 0.587 0.100 0.277 0.226 2.24 0.597

Composite CO : 8.20 9.18 12.43 10.01 6.44 0.644 0.519 0.902 9.70 8.481

Composite NOX : 0.473 0.609 0.989 0.706 1.930 0.296 0.612 5.490 1.37 1.089

-----

\* #####

\* CHEROKEE COUNTY 2012

\* File 1, Run 3, Scenario 4.

\* #####

M583 Warning:

The user supplied arterial average speed of 52.4 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2012

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			

VMT Distribution:	0.3271	0.4043	0.1389		0.0360	0.0003	0.0020	0.0861	0.0054	1.0000			
-------------------	--------	--------	--------	--	--------	--------	--------	--------	--------	--------	--	--	--

-----

Composite Emission Factors (g/mi):

Composite VOC : 0.526 0.581 1.017 0.693 0.595 0.101 0.280 0.229 2.24 0.602

Composite CO : 8.07 9.05 12.27 9.88 6.25 0.640 0.515 0.890 9.70 8.360

Composite NOX : 0.470 0.605 0.985 0.702 1.907 0.283 0.586 5.257 1.33 1.065

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\* #####

\* CHEROKEE COUNTY 2012

\* File 1, Run 3, Scenario 5.

\* #####

M583 Warning:

The user supplied arterial average speed of 50.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2012

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
VMT Distribution:	0.3271	0.4043	0.1389		0.0360	0.0003	0.0020	0.0861	0.0054	1.0000			

-----

Composite Emission Factors (g/mi):

Composite VOC :	0.533	0.587	1.030	0.700	0.605	0.102	0.283	0.234	2.24	0.609
Composite CO :	7.90	8.87	12.04	9.68	5.97	0.633	0.510	0.873	9.70	8.184
Composite NOX :	0.467	0.600	0.979	0.697	1.874	0.265	0.548	4.921	1.26	1.030

-----

\* #####

\* YORK COUNTY 2012

\* File 1, Run 3, Scenario 6.

\* #####

M583 Warning:

The user supplied arterial average speed of 30.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2012

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.3271	0.4043	0.1389		0.0360	0.0003	0.0020	0.0861	0.0054	1.0000			

-----  
Composite Emission Factors (g/mi):

Composite VOC :	0.623	0.655	1.165	0.785	0.790	0.131	0.361	0.348	2.52	0.703
-----------------	-------	-------	-------	-------	-------	-------	-------	-------	------	-------

Composite CO :	6.79	7.73	10.59	8.46	7.30	0.749	0.600	1.183	13.66	7.257
----------------	------	------	-------	------	------	-------	-------	-------	-------	-------

Composite NOX :	0.463	0.584	0.964	0.681	1.613	0.224	0.463	4.162	1.09	0.945
-----------------	-------	-------	-------	-------	-------	-------	-------	-------	------	-------

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\* #####

\* CHEROKEE COUNTY 2012

\* File 1, Run 3, Scenario 7.

\* #####

M583 Warning:

The user supplied arterial average speed of 26.3 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for

all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2012

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.3271	0.4043	0.1389		0.0360	0.0003	0.0020	0.0861	0.0054	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	0.651	0.679	1.210	0.815	0.858	0.141	0.388	0.389	2.63	0.735			
Composite CO :	6.90	7.83	10.72	8.57	8.36	0.813	0.650	1.357	15.28	7.410			
Composite NOX :	0.480	0.600	0.988	0.699	1.567	0.231	0.478	4.289	1.05	0.969			
-----													

\* #####

\* CHEROKEE COUNTY 2012

\* File 1, Run 3, Scenario 8.

\* #####

M583 Warning:

The user supplied arterial average speed of 24.9 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2012

Month: July  
 Altitude: Low  
 Minimum Temperature: 66.3 (F)  
 Maximum Temperature: 91.2 (F)  
 Absolute Humidity: 75. grains/lb  
 Nominal Fuel RVP: 9.0 psi  
 Weathered RVP: 8.6 psi  
 Fuel Sulfur Content: 30. ppm  
 Exhaust I/M Program: No  
 Evap I/M Program: No  
 ATP Program: No  
 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VTM Distribution:	0.3271	0.4043	0.1389		0.0360	0.0003	0.0020	0.0861	0.0054	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	0.665	0.691	1.230	0.829	0.889	0.145	0.401	0.407	2.68	0.750			
Composite CO :	6.95	7.87	10.78	8.62	8.84	0.842	0.673	1.437	16.01	7.482			
Composite NOX :	0.488	0.607	0.999	0.707	1.547	0.234	0.484	4.348	1.03	0.981			
-----													

\* #####  
 \* CHEROKEE COUNTY 2012  
 \* File 1, Run 3, Scenario 9.  
 \* #####

M 48 Warning:  
 There are no sales for vehicle class HDGV8b

M 48 Warning:  
 There are no sales for vehicle class LDDT12

\*\*\*\*\*

\* MOBILE6.2.03 (24-Sep-2003)  
 \* Input file: 0607.IN (file 1, run 4).

\*\*\*\*\*

M603 Comment:  
 User has disabled the calculation of REFUELING emissions.

\* #####  
 \* CHEROKEE COUNTY 2014

\* File 1, Run 4, Scenario 1.

\* #####

M 96 Warning:

75.0 speed reduced to 65 mph maximum

M515 Warning:

The combined freeway and ramp average speed entered cannot be greater than 60.7 miles per hour.

The average speed will be reset to this value.

M582 Warning:

The user supplied freeway average speed of 60.7 will be used for all hours of the day. 100% of VMT has been assigned to a fixed combination of freeways and freeway ramps for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2014

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
VMT Distribution:	0.3099	0.4167	0.1431		0.0360	0.0003	0.0021	0.0866	0.0053	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	0.431	0.505	0.880	0.601	0.479	0.081	0.247	0.207	2.80	0.520			
Composite CO :	8.23	9.20	12.40	10.02	8.50	0.666	0.535	0.758	23.81	8.656			
Composite NOX :	0.409	0.531	0.908	0.627	1.490	0.279	0.703	5.993	1.62	1.060			
-----													

\* #####

\* CHEROKEE COUNTY 2014

\* File 1, Run 4, Scenario 2.

\* #####

M583 Warning:

The user supplied arterial average speed of 53.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2014

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.3099	0.4167	0.1431		0.0360	0.0003	0.0021	0.0866	0.0053	1.0000			

-----  
Composite Emission Factors (g/mi):

Composite VOC :	0.441	0.515	0.907	0.615	0.490	0.082	0.248	0.208	2.24	0.529
-----------------	-------	-------	-------	-------	-------	-------	-------	-------	------	-------

Composite CO :	7.39	8.35	11.34	9.12	6.00	0.591	0.478	0.609	9.70	7.716
----------------	------	------	-------	------	------	-------	-------	-------	------	-------

Composite NOX :	0.393	0.508	0.874	0.602	1.400	0.193	0.487	3.942	1.34	0.858
-----------------	-------	-------	-------	-------	-------	-------	-------	-------	------	-------

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\* #####

\* CHEROKEE COUNTY 2014

\* File 1, Run 4, Scenario 3.

\* #####

M583 Warning:

The user supplied arterial average speed of 54.1 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for

all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2014

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.3099	0.4167	0.1431		0.0360	0.0003	0.0021	0.0866	0.0053	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	0.439	0.513	0.903	0.613	0.486	0.081	0.246	0.207	2.24	0.527			
Composite CO :	7.46	8.42	11.43	9.19	6.11	0.593	0.479	0.613	9.70	7.783			
Composite NOX :	0.394	0.510	0.876	0.604	1.410	0.198	0.500	4.046	1.37	0.869			
-----													

\* #####

\* CHEROKEE COUNTY 2014

\* File 1, Run 4, Scenario 4.

\* #####

M583 Warning:

The user supplied arterial average speed of 52.3 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2014  
 Month: July  
 Altitude: Low  
 Minimum Temperature: 66.3 (F)  
 Maximum Temperature: 91.2 (F)  
 Absolute Humidity: 75. grains/lb  
 Nominal Fuel RVP: 9.0 psi  
 Weathered RVP: 8.6 psi  
 Fuel Sulfur Content: 30. ppm  
 Exhaust I/M Program: No  
 Evap I/M Program: No  
 ATP Program: No  
 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.3099	0.4167	0.1431		0.0360	0.0003	0.0021	0.0866	0.0053	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	0.443	0.517	0.910	0.617	0.492	0.082	0.249	0.210	2.24	0.531			
Composite CO :	7.34	8.31	11.29	9.07	5.93	0.589	0.476	0.605	9.70	7.672			
Composite NOX :	0.392	0.507	0.872	0.600	1.393	0.190	0.479	3.873	1.32	0.851			
-----													

\* #####  
 \* CHEROKEE COUNTY 2014  
 \* File 1, Run 4, Scenario 5.  
 \* #####

M583 Warning:  
 The user supplied arterial average speed of 50.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:  
 There are no sales for vehicle class HDGV8b

M 48 Warning:  
 There are no sales for vehicle class LDDT12  
 Calendar Year: 2014  
 Month: July  
 Altitude: Low  
 Minimum Temperature: 66.3 (F)  
 Maximum Temperature: 91.2 (F)  
 Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi  
 Weathered RVP: 8.6 psi  
 Fuel Sulfur Content: 30. ppm  
 Exhaust I/M Program: No  
 Evap I/M Program: No  
 ATP Program: No  
 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VTM Distribution:	0.3099	0.4167	0.1431		0.0360	0.0003	0.0021	0.0866	0.0053	1.0000			
-----													
Composite Emission Factors (g/mi):													
Composite VOC :	0.448	0.521	0.921	0.624	0.501	0.083	0.251	0.214	2.24	0.537			
Composite CO :	7.19	8.15	11.08	8.90	5.68	0.584	0.472	0.594	9.70	7.517			
Composite NOX :	0.389	0.503	0.867	0.596	1.370	0.178	0.449	3.635	1.26	0.826			
-----													

\* #####  
 \* YORK COUNTY 2002 BASELINE  
 \* File 1, Run 4, Scenario 6.  
 \* #####

M583 Warning:

The user supplied arterial average speed of 30.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b  
 Calendar Year: 2010  
 Month: July  
 Altitude: Low  
 Minimum Temperature: 66.3 (F)  
 Maximum Temperature: 91.2 (F)  
 Absolute Humidity: 75. grains/lb  
 Nominal Fuel RVP: 9.0 psi  
 Weathered RVP: 8.6 psi  
 Fuel Sulfur Content: 30. ppm  
 Exhaust I/M Program: No  
 Evap I/M Program: No  
 ATP Program: No  
 Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.3478	0.3890	0.1336		0.0359	0.0003	0.0020	0.0860	0.0054	1.0000			

-----

Composite Emission Factors (g/mi):

Composite VOC :	0.755	0.770	1.331	0.913	0.917	0.181	0.442	0.396	2.52	0.821
Composite CO :	7.60	8.73	12.12	9.60	8.10	0.842	0.707	1.557	13.66	8.158
Composite NOX :	0.559	0.694	1.073	0.791	2.110	0.346	0.603	5.598	1.09	1.172

-----

\* #####

\* CHEROKEE COUNTY 2014 BASELINE

\* File 1, Run 4, Scenario 7.

\* #####

M583 Warning:

The user supplied arterial average speed of 26.3 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2014

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.3099	0.4167	0.1431		0.0360	0.0003	0.0021	0.0866	0.0053	1.0000			

-----

Composite Emission Factors (g/mi):

Composite VOC :	0.549	0.601	1.075	0.723	0.713	0.114	0.341	0.356	2.63	0.646
-----------------	-------	-------	-------	-------	-------	-------	-------	-------	------	-------

Composite CO :	6.31	7.21	9.86	7.89	7.94	0.749	0.599	0.924	15.28	6.820
Composite NOX :	0.401	0.503	0.875	0.598	1.146	0.155	0.392	3.169	1.05	0.781

---

\* #####  
 \* CHEROKEE COUNTY 2014 BASELINE  
 \* File 1, Run 4, Scenario 8.  
 \* #####

M583 Warning:

The user supplied arterial average speed of 25.0 will be used for all hours of the day. 100% of VMT has been assigned to the arterial/collector roadway type for all hours of the day and all vehicle types.

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

Calendar Year: 2014

Month: July

Altitude: Low

Minimum Temperature: 66.3 (F)

Maximum Temperature: 91.2 (F)

Absolute Humidity: 75. grains/lb

Nominal Fuel RVP: 9.0 psi

Weathered RVP: 8.6 psi

Fuel Sulfur Content: 30. ppm

Exhaust I/M Program: No

Evap I/M Program: No

ATP Program: No

Reformulated Gas: No

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh	GVWR: <6000	>6000	(All)
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----			
VMT Distribution:	0.3099	0.4167	0.1431		0.0360	0.0003	0.0021	0.0866	0.0053	1.0000			

---

Composite Emission Factors (g/mi):

Composite VOC :	0.560	0.611	1.092	0.734	0.736	0.118	0.351	0.371	2.68	0.658
Composite CO :	6.35	7.25	9.91	7.93	8.36	0.774	0.618	0.974	15.96	6.880
Composite NOX :	0.407	0.508	0.884	0.604	1.131	0.157	0.396	3.209	1.03	0.789

---

\* #####  
 \* CHEROKEE COUNTY 2014 BASELINE

\* File 1, Run 4, Scenario 9.

\* #####

M 48 Warning:

There are no sales for vehicle class HDGV8b

M 48 Warning:

There are no sales for vehicle class LDDT12

**ATTACHMENT D**

**NONROAD2005 INPUT AND OUTPUT DATA**

**\*\*\* Output Files \*\*\***

Output data file: c:\nonroad\outputs\cher02.out

**\*\*\* Input Files \*\*\***

Options file: C:\nonroad\Cher02.opt  
 Allocation XREF file: data\allocate\allocate.xrf  
 Activity file: data\activity\activity.dat  
 State/Regions file: data\season\season.dat  
 Seasonality file: data\season\season.dat  
 Exh Tech fractions: data\tech\tech-exh.dat  
 Evap Tech fractions: data\tech\tech-evp.dat  
 US Counties FIPS: data\allocate\fips.dat  
 Retrofit file :

**\*\*\* Population Files \*\*\***

:c:\nonroad\data\pop\sc.pop

**\*\*\* Emission Factors Files \*\*\***

BSFC file: data\emsfac\bsfc.emf  
 THC EXHAUST file: data\emsfac\exhthc.emf  
 CO EXHAUST file: data\emsfac\exhco.emf  
 NOX EXHAUST file: data\emsfac\exhnox.emf  
 CO2 EXHAUST file: Not Supplied.  
 SO2 EXHAUST file: Not Supplied.  
 PM EXHAUST file: data\emsfac\exhpm.emf  
 CRANKCASE file: data\emsfac\crank.emf  
 DIURNAL file: data\emsfac\evdiu.emf  
 TANK PERM file: data\emsfac\evtank.emf  
 NON-RM HOSE PERM fil: data\emsfac\evhose.emf  
 RM FILL NECK PERM fi: data\emsfac\evneck.emf  
 RM SUPPLY/RETURN fil: data\emsfac\evsupret.emf  
 RM VENT PERM file: data\emsfac\evvent.emf  
 HOT SOAKS file: data\emsfac\evhotsk.emf  
 DISPLACEMENT file: Not Supplied.  
 SPILLAGE file: data\emsfac\spillage.emf  
 RUNINGLOSS file: data\emsfac\evrunls.emf

**\*\*\* Deterioration Factors Files \*\*\***

THC EXHAUST file: data\detfac\exhthc.det  
 CO EXHAUST file: data\detfac\exhco.det  
 NOX EXHAUST file: data\detfac\exhnox.det  
 CO2 EXHAUST file: Not Supplied.  
 SO2 EXHAUST file: Not Supplied.  
 PM EXHAUST file: data\detfac\exhpm.det  
 CRANKCASE file: Not Supplied.  
 DIURNAL file: data\detfac\evdiu.det

TANK PERM file:	Not Supplied.
NON-RM HOSE PERM fil:	Not Supplied.
RM FILL NECK PERM fi:	Not Supplied.
RM SUPPLY/RETURN fil:	Not Supplied.
RM VENT PERM file:	Not Supplied.
HOT SOAKS file:	Not Supplied.
DISPLACEMENT file:	Not Supplied.
SPILLAGE file:	Not Supplied.
RUNINGLOSS file:	Not Supplied.

### \*\*\* Spatial Allocation Files \*\*\*

```

:c:\nonroad\data\allocate\sc_airtr.alo
:c:\nonroad\data\allocate\sc_coal.alo
:c:\nonroad\data\allocate\sc_const.alo
:c:\nonroad\data\allocate\sc_farms.alo
:c:\nonroad\data\allocate\sc_golf.alo
:c:\nonroad\data\allocate\sc_holsl.alo
:c:\nonroad\data\allocate\sc_house.alo
:c:\nonroad\data\allocate\sc_loggn.alo
:c:\nonroad\data\allocate\sc_lscap.alo
:c:\nonroad\data\allocate\sc_mnfg.alo
:c:\nonroad\data\allocate\sc_oil.alo
:c:\nonroad\data\allocate\sc_pop.alo
:c:\nonroad\data\allocate\sc_rail.alo
:c:\nonroad\data\allocate\sc_rvprk.alo
:c:\nonroad\data\allocate\sc_sbc.alo
:c:\nonroad\data\allocate\sc_sbr.alo
:c:\nonroad\data\allocate\sc_snowm.alo
:c:\nonroad\data\allocate\sc_wib.alo
:c:\nonroad\data\allocate\sc_wob.alo

```

### \*\*\* Growth Indicator Files \*\*\*

```
:data\growth\nation.grw
```

### \*\*\* Scenario Specific Parameters \*\*\*

First Title line:	CHEROKEE COUNTY
Second Title line:	2002
Fuel RVP (psi):	8.00
Fuel Oxygen weight %:	0.00
Gasoline Sulfur %:	0.0339
Diesel Sulfur %:	0.2284
Marine Diesel Sulfur:	0.2637
LPG/CNG Sulfur %:	0.0030
Minimum Temperature:	60.00
Maximum Temperature:	84.00
Average Ambient Temp:	75.00
Altitude of region:	LOW
Stage II Control %:	0.00

**\*\*\* Period Parameters \*\*\***

Year of Inventory: 2002  
Inventory for: ANNUAL period  
Emissions summed for: PERIOD TOTAL  
Year of Growth Calc: 2002  
Year of Tech Sel: 2002

**\*\*\* Region of Interest \*\*\***

Region level: County-level estimates  
Counties of Interest: 45021 - Cherokee County, South Carolina

**\*\*\* Equipment Types \*\*\***

All equipment types.

**\*\*\*\* Number of Population Records Found \*\*\*\***

45000 South Carolina: 1183

\*\*\*\*\*

**EPA's NONROAD Emissions Model, Core Model Ver 2005a, Feb 2006 Dec 05 09:50:57: 2007**

**\*\*\* Output Files \*\*\***

Output data file: c:\nonroad\outputs\cher10.out

**\*\*\* Input Files \*\*\***

Options file: C:\nonroad\Cher10.opt  
Allocation XREF file: data\allocate\allocate.xrf  
Activity file: data\activity\activity.dat  
State/Regions file: data\season\season.dat  
Seasonality file: data\season\season.dat  
Exh Tech fractions: data\tech\tech-exh.dat  
Evap Tech fractions: data\tech\tech-evp.dat  
US Counties FIPS: data\allocate\fips.dat  
Retrofit file:

**\*\*\* Population Files \*\*\***

:c:\nonroad\data\pop\sc.pop

**\*\*\* Emission Factors Files \*\*\***

BSFC file: data\emsfac\bsfc.emf  
THC EXHAUST file: data\emsfac\exhthc.emf  
CO EXHAUST file: data\emsfac\exhco.emf  
NOX EXHAUST file: data\emsfac\exhnox.emf  
CO2 EXHAUST file: Not Supplied.  
SO2 EXHAUST file: Not Supplied.

PM EXHAUST file:	data\emsfac\exhpm.emf
CRANKCASE file:	data\emsfac\crank.emf
DIURNAL file:	data\emsfac\evdiu.emf
TANK PERM file:	data\emsfac\evtank.emf
NON-RM HOSE PERM fil:	data\emsfac\evhose.emf
RM FILL NECK PERM fil:	data\emsfac\evneck.emf
RM SUPPLY/RETURN fil:	data\emsfac\evsupret.emf
RM VENT PERM file:	data\emsfac\evvent.emf
HOT SOAKS file:	data\emsfac\evhotsk.emf
DISPLACEMENT file:	Not Supplied.
SPILLAGE file:	data\emsfac\spillage.emf
RUNINGLOSS file:	data\emsfac\evrunls.emf

### \*\*\* Deterioration Factors Files \*\*\*

THC EXHAUST file:	data\detfac\exhthc.det
CO EXHAUST file:	data\detfac\exhco.det
NOX EXHAUST file:	data\detfac\exhnox.det
CO2 EXHAUST file:	Not Supplied.
SO2 EXHAUST file:	Not Supplied.
PM EXHAUST file:	data\detfac\exhpm.det
CRANKCASE file:	Not Supplied.
DIURNAL file:	data\detfac\evdiu.det
TANK PERM file:	Not Supplied.
NON-RM HOSE PERM fil:	Not Supplied.
RM FILL NECK PERM fil:	Not Supplied.
RM SUPPLY/RETURN fil:	Not Supplied.
RM VENT PERM file:	Not Supplied.
HOT SOAKS file:	Not Supplied.
DISPLACEMENT file:	Not Supplied.
SPILLAGE file:	Not Supplied.
RUNINGLOSS file:	Not Supplied.

### \*\*\* Spatial Allocation Files \*\*\*

```

:c:\nonroad\data\allocate\sc_airtr.alo
:c:\nonroad\data\allocate\sc_coal.alo
:c:\nonroad\data\allocate\sc_const.alo
:c:\nonroad\data\allocate\sc_farms.alo
:c:\nonroad\data\allocate\sc_golf.alo
:c:\nonroad\data\allocate\sc_holsl.alo
:c:\nonroad\data\allocate\sc_house.alo
:c:\nonroad\data\allocate\sc_loggn.alo
:c:\nonroad\data\allocate\sc_lscap.alo
:c:\nonroad\data\allocate\sc_mnfg.alo
:c:\nonroad\data\allocate\sc_oil.alo
:c:\nonroad\data\allocate\sc_pop.alo
:c:\nonroad\data\allocate\sc_rail.alo
:c:\nonroad\data\allocate\sc_rvprk.alo
:c:\nonroad\data\allocate\sc_sbc.alo
:c:\nonroad\data\allocate\sc_sbr.alo
:c:\nonroad\data\allocate\sc_snowm.alo
:c:\nonroad\data\allocate\sc_wib.alo

```

:c:\nonroad\data\allocate\sc\_wob.alo

**\*\*\* Growth Indicator Files \*\*\***

:data\growth\nation.grw

**\*\*\* Scenario Specific Parameters \*\*\***

First Title line:	CHEROKEE COUNTY
Second Title line:	2010
Fuel RVP (psi):	8.00
Fuel Oxygen weight %:	0.00
Gasoline Sulfur %:	0.0339
Diesel Sulfur %:	0.2284
Marine Diesel Sulfur:	0.2637
LPG/CNG Sulfur %:	0.0030
Minimum Temperature:	60.00
Maximum Temperature:	84.00
Average Ambient Temp:	75.00
Altitude of region:	LOW
Stage II Control %:	0.00

**\*\*\* Period Parameters \*\*\***

Year of Inventory:	2010
Inventory for:	ANNUAL period
Emissions summed for:	PERIOD TOTAL
Year of Growth Calc:	2010
Year of Tech Sel:	2010

**\*\*\* Region of Interest \*\*\***

Region level:	County-level estimates
Counties of Interest:	45021 - Cherokee County, South Carolina

**\*\*\* Equipment Types \*\*\***

All equipment types.

**\*\*\*\* Number of Population Records Found \*\*\*\***

45000 South Carolina:	1183
-----------------------	------

\*\*\*\*\*

**EPA's NONROAD Emissions Model, Core Model Ver 2005a, Feb 2006    Dec 05 09:54:16: 2007**

**\*\*\* Output Files \*\*\***

Output data file:	c:\nonroad\outputs\cher12.out
-------------------	-------------------------------

**\*\*\* Input Files \*\*\***

Options file:	C:\nonroad\Cher12.opt
Allocation XREF file:	data\allocate\allocate.xrf
Activity file:	data\activity\activity.dat
State/Regions file:	data\season\season.dat
Seasonality file:	data\season\season.dat
Exh Tech fractions:	data\tech\tech-exh.dat
Evap Tech fractions:	data\tech\tech-evp.dat
US Counties FIPS:	data\allocate\fips.dat
Retrofitfile:	

**\*\*\* Population Files \*\*\***

:c:\nonroad\data\pop\sc.pop

**\*\*\* Emission Factors Files \*\*\***

BSFC file:	data\emsfac\bsfc.emf
THC EXHAUST file:	data\emsfac\exhthc.emf
CO EXHAUST file:	data\emsfac\exhco.emf
NOX EXHAUST file:	data\emsfac\exhnox.emf
CO2 EXHAUST file:	Not Supplied.
SO2 EXHAUST file:	Not Supplied.
PM EXHAUST file:	data\emsfac\exhpm.emf
CRANKCASE file:	data\emsfac\crank.emf
DIURNAL file:	data\emsfac\evdiu.emf
TANK PERM file:	data\emsfac\evtank.emf
NON-RM HOSE PERM fil:	data\emsfac\evhose.emf
RM FILL NECK PERM fil:	data\emsfac\evneck.emf
RM SUPPLY/RETURN fil:	data\emsfac\evsupret.emf
RM VENT PERM file:	data\emsfac\evvent.emf
HOT SOAKS file:	data\emsfac\evhotsk.emf
DISPLACEMENT file:	Not Supplied.
SPILLAGE file:	data\emsfac\spillage.emf
RUNINGLOSS file:	data\emsfac\evrunls.emf

**\*\*\* Deterioration Factors Files \*\*\***

THC EXHAUST file:	data\detfac\exhthc.det
CO EXHAUST file:	data\detfac\exhco.det
NOX EXHAUST file:	data\detfac\exhnox.det
CO2 EXHAUST file:	Not Supplied.
SO2 EXHAUST file:	Not Supplied.
PM EXHAUST file:	data\detfac\exhpm.det
CRANKCASE file:	Not Supplied.
DIURNAL file:	data\detfac\evdiu.det
TANK PERM file:	Not Supplied.
NON-RM HOSE PERM fil:	Not Supplied.
RM FILL NECK PERM fil:	Not Supplied.
RM SUPPLY/RETURN fil:	Not Supplied.
RM VENT PERM file:	Not Supplied.
HOT SOAKS file:	Not Supplied.
DISPLACEMENT file:	Not Supplied.
SPILLAGE file:	Not Supplied.

RUNINGLOSS file: Not Supplied.

**\*\*\* Spatial Allocation Files \*\*\***

:c:\nonroad\data\allocate\sc\_airtr.alo  
:c:\nonroad\data\allocate\sc\_coal.alo  
:c:\nonroad\data\allocate\sc\_const.alo  
:c:\nonroad\data\allocate\sc\_farms.alo  
:c:\nonroad\data\allocate\sc\_golf.alo  
:c:\nonroad\data\allocate\sc\_holsl.alo  
:c:\nonroad\data\allocate\sc\_house.alo  
:c:\nonroad\data\allocate\sc\_loggn.alo  
:c:\nonroad\data\allocate\sc\_lscap.alo  
:c:\nonroad\data\allocate\sc\_mnfg.alo  
:c:\nonroad\data\allocate\sc\_oil.alo  
:c:\nonroad\data\allocate\sc\_pop.alo  
:c:\nonroad\data\allocate\sc\_rail.alo  
:c:\nonroad\data\allocate\sc\_rvprk.alo  
:c:\nonroad\data\allocate\sc\_sbc.alo  
:c:\nonroad\data\allocate\sc\_sbr.alo  
:c:\nonroad\data\allocate\sc\_snowm.alo  
:c:\nonroad\data\allocate\sc\_wib.alo  
:c:\nonroad\data\allocate\sc\_wob.alo

**\*\*\* Growth Indicator Files \*\*\***

:data\growth\nation.grw

**\*\*\* Scenario Specific Parameters \*\*\***

First Title line:	CHEROKEE COUNTY
Second Title line:	2012
Fuel RVP (psi):	8.00
Fuel Oxygen weight %:	0.00
Gasoline Sulfur %:	0.0339
Diesel Sulfur %:	0.2284
Marine Diesel Sulfur:	0.2637
LPG/CNG Sulfur %:	0.0030
Minimum Temperature:	60.00
Maximum Temperature:	84.00
Average Ambient Temp:	75.00
Altitude of region:	LOW
Stage II Control %:	0.00

**\*\*\* Period Parameters \*\*\***

Year of Inventory:	2012
Inventory for:	ANNUAL period
Emissions summed for:	PERIOD TOTAL
Year of Growth Calc:	2012
Year of Tech Sel:	2012

**\*\*\* Region of Interest \*\*\***

Region level: County-level estimates  
Counties of Interest: 45021 - Cherokee County, South Carolina

**\*\*\* Equipment Types \*\*\***

All equipment types.

**\*\*\* Number of Population Records Found \*\*\***

45000 South Carolina: 1183

\*\*\*\*\*

**EPA`s NONROAD Emissions Model, Core Model Ver 2005a, Feb 2006 Dec 05 09:58:06: 2007**

**\*\*\* Output Files \*\*\***

Output data file :c:\nonroad\outputs\cher14.out

**\*\*\* Input Files \*\*\***

Options file: C:\nonroad\Cher14.opt  
Allocation XREF file: data\allocate\allocate.xrf  
Activity file: data\activity\activity.dat  
State/Regions file: data\season\season.dat  
Seasonality file: data\season\season.dat  
Exh Tech fractions: data\tech\tech-exh.dat  
Evap Tech fractions: data\tech\tech-evp.dat  
US Counties FIPS: data\allocate\fips.dat  
Retrofitfile:

**\*\*\* Population Files \*\*\***

:c:\nonroad\data\pop\sc.pop

**\*\*\* Emission Factors Files \*\*\***

BSFC file: data\emsfac\bsfc.emf  
THC EXHAUST file: data\emsfac\exhthc.emf  
CO EXHAUST file: data\emsfac\exhco.emf  
NOX EXHAUST file: data\emsfac\exhnox.emf  
CO2 EXHAUST file: Not Supplied.  
SO2 EXHAUST file: Not Supplied.  
PM EXHAUST file: data\emsfac\exhpm.emf  
CRANKCASE file: data\emsfac\crank.emf  
DIURNAL file: data\emsfac\evdiu.emf  
TANK PERM file: data\emsfac\evtank.emf  
NON-RM HOSE PERM fil: data\emsfac\evhose.emf  
RM FILL NECK PERM fil: data\emsfac\evneck.emf  
RM SUPPLY/RETURN fil: data\emsfac\evsupret.emf

RM VENT PERM file:	data\emsfac\evvent.emf
HOT SOAKS file:	data\emsfac\evhotsk.emf
DISPLACEMENT file:	Not Supplied.
SPILLAGE file:	data\emsfac\spillage.emf
RUNINGLOSS file:	data\emsfac\evrunls.emf

**\*\*\* Deterioration Factors Files \*\*\***

THC EXHAUST file:	data\detfac\exhthc.det
CO EXHAUST file:	data\detfac\exhco.det
NOX EXHAUST file:	data\detfac\exhnox.det
CO2 EXHAUST file:	Not Supplied.
SO2 EXHAUST file:	Not Supplied.
PM EXHAUST file:	data\detfac\exhpm.det
CRANKCASE file:	Not Supplied.
DIURNAL file:	data\detfac\evdiu.det
TANK PERM file:	Not Supplied.
NON-RM HOSE PERM fil:	Not Supplied.
RM FILL NECK PERM fil:	Not Supplied.
RM SUPPLY/RETURN fil:	Not Supplied.
RM VENT PERM file:	Not Supplied.
HOT SOAKS file:	Not Supplied.
DISPLACEMENT file:	Not Supplied.
SPILLAGE file:	Not Supplied.
RUNINGLOSS file:	Not Supplied.

**\*\*\* Spatial Allocation Files \*\*\***

```

:c:\nonroad\data\allocate\sc_airtr.alo
:c:\nonroad\data\allocate\sc_coal.alo
:c:\nonroad\data\allocate\sc_const.alo
:c:\nonroad\data\allocate\sc_farms.alo
:c:\nonroad\data\allocate\sc_golf.alo
:c:\nonroad\data\allocate\sc_holsl.alo
:c:\nonroad\data\allocate\sc_house.alo
:c:\nonroad\data\allocate\sc_loggn.alo
:c:\nonroad\data\allocate\sc_lscap.alo
:c:\nonroad\data\allocate\sc_mnfg.alo
:c:\nonroad\data\allocate\sc_oil.alo
:c:\nonroad\data\allocate\sc_pop.alo
:c:\nonroad\data\allocate\sc_rail.alo
:c:\nonroad\data\allocate\sc_rvprk.alo
:c:\nonroad\data\allocate\sc_sbc.alo
:c:\nonroad\data\allocate\sc_sbr.alo
:c:\nonroad\data\allocate\sc_snowm.alo
:c:\nonroad\data\allocate\sc_wib.alo
:c:\nonroad\data\allocate\sc_wob.alo

```

**\*\*\* Growth Indicator Files \*\*\***

```

:data\growth\nation.grw

```

**\*\*\* Scenario Specific Parameters \*\*\***

First Title line:	CHEROKEE COUNTY
Second Title line:	2014
Fuel RVP (psi):	8.00
Fuel Oxygen weight %:	0.00
Gasoline Sulfur %:	0.0339
Diesel Sulfur %:	0.2284
Marine Diesel Sulfur:	0.2637
LPG/CNG Sulfur %:	0.0030
Minimum Temperature:	60.00
Maximum Temperature:	84.00
Average Ambient Temp:	75.00
Altitude of region:	LOW
Stage II Control %:	0.00

**\*\*\* Period Parameters \*\*\***

Year of Inventory:	2014
Inventory for:	ANNUAL period
Emissions summed for:	PERIOD TOTAL
Year of Growth Calc:	2014
Year of Tech Sel:	2014

**\*\*\* Region of Interest \*\*\***

Region level:	County-level estimates
Counties of Interest:	45021 - Cherokee County, South Carolina

**\*\*\* Equipment Types \*\*\***

All equipment types.

**\*\*\*\* Number of Population Records Found \*\*\*\***

45000 South Carolina:	1183
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**ATTACHMENT E**

**SUMMARIES OF NON-ROAD EMISSION TOTALS  
FROM NONROAD2005 DATA**

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**Emission Totals by County and Pollutant****All Fuels****Tons/Year**

CHEROKEE COUNTY

2002 (Cherokee County 2002)

Total for year: 2002

Date of Model Run: Dec 05 09:37:46: 2007

Today's Date: 12/5/2007

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FIPS	County	Exhaust VOC	Exhaust NOx	Exhaust CO	Exhaust PM25	Exhaust SO2	Exhaust CO2	Crankcase VOC	Diurnal VOC
45021	Cherokee County	234.74	286.48	3,103.24	21.21	21.23	25,076.73	8.21	10.77
<b>Totals:</b>		<b>234.74</b>	<b>286.48</b>	<b>3,103.24</b>	<b>21.21</b>	<b>21.23</b>	<b>25,076.73</b>	<b>8.21</b>	<b>10.77</b>

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**Emission Totals by County and Pollutant****All Fuels****Tons/Year**

CHEROKEE COUNTY

2002 (Cherokee County 2002)

Total for year: 2002

Date of Model Run: Dec 05 09:37:46: 2007

Today's Date: 12/5/2007

---

FIPS	County	Vapor Displacement VOC	Spillage VOC	Hot Soak VOC	Running Loss VOC	Tank Permeation VOC	Hose Permeation VOC	Total VOC
45021	Cherokee County	2.44	8.97	1.33	3.72	11.27	33.98	315.43
<b>Totals:</b>		<b>2.44</b>	<b>8.97</b>	<b>1.33</b>	<b>3.72</b>	<b>11.27</b>	<b>33.98</b>	<b>315.43</b>

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**Emission Totals by County and Pollutant****All Fuels****Tons/Year**

CHEROKEE COUNTY

2010 (Cherokee County 2010)

Total for year: 2010

Date of Model Run: Dec 05 09:50:59: 2007

Today's Date: 12/5/2007

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FIPS	County	Exhaust VOC	Exhaust NOx	Exhaust CO	Exhaust PM25	Exhaust SO2	Exhaust CO2	Crankcase VOC	Diurnal VOC
45021	Cherokee County	133.36	198.84	3,253.38	17.72	25.38	28,452.97	2.61	12.02
Totals:		133.36	198.84	3,253.38	17.72	25.38	28,452.97	2.61	12.02

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**Emission Totals by County and Pollutant****All Fuels****Tons/Year**

CHEROKEE COUNTY

2010 (Cherokee County 2010)

Total for year: 2010

Date of Model Run: Dec 05 09:50:59: 2007

Today's Date: 12/5/2007

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FIPS	County	Vapor Displacement VOC	Spillage VOC	Hot Soak VOC	Running Loss VOC	Tank Permeation VOC	Hose Permeation VOC	Total VOC
45021	Cherokee County	2.38	8.56	1.48	4.26	12.60	38.46	215.73
<b>Totals:</b>		<b>2.38</b>	<b>8.56</b>	<b>1.48</b>	<b>4.26</b>	<b>12.60</b>	<b>38.46</b>	<b>215.73</b>

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**Emission Totals by County and Pollutant****All Fuels****Tons/Year**

CHEROKEE COUNTY

2012 (Cherokee County 2012)

Total for year: 2012

Date of Model Run: Dec 05 09:54:17: 2007

Today's Date: 12/5/2007

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FIPS	County	Exhaust VOC	Exhaust NOx	Exhaust CO	Exhaust PM25	Exhaust SO2	Exhaust CO2	Crankcase VOC	Diurnal VOC
45021	Cherokee County	119.61	168.87	3,240.84	19.96	25.46	29,370.95	1.26	12.33
Totals:		119.61	168.87	3,240.84	19.96	25.46	29,370.95	1.26	12.33

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**Emission Totals by County and Pollutant****All Fuels****Tons/Year**

CHEROKEE COUNTY

2012 (Cherokee County 2012)

Total for year: 2012

Date of Model Run: Dec 05 09:54:17: 2007

Today's Date: 12/5/2007

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FIPS	County	Vapor Displacement VOC	Spillage VOC	Hot Soak VOC	Running Loss VOC	Tank Permeation VOC	Hose Permeation VOC	Total VOC
45021	Cherokee County	2.40	8.75	1.52	4.39	12.94	39.59	202.80
<b>Totals:</b>		<b>2.40</b>	<b>8.75</b>	<b>1.52</b>	<b>4.39</b>	<b>12.94</b>	<b>39.59</b>	<b>202.80</b>

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**Emission Totals by County and Pollutant****All Fuels****Tons/Year**

CHEROKEE COUNTY

2014 (Cherokee County 2014)

Total for year: 2014

Date of Model Run: Dec 05 09:58:07: 2007

Today's Date: 12/5/2007

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FIPS	County	Exhaust VOC	Exhaust NOx	Exhaust CO	Exhaust PM25	Exhaust SO2	Exhaust CO2	Crankcase VOC	Diurnal VOC
45021	Cherokee County	111.38	144.85	3,236.76	23.49	25.02	30,422.75	0.74	12.64
Totals:		111.38	144.85	3,236.76	23.49	25.02	30,422.75	0.74	12.64

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**Emission Totals by County and Pollutant****All Fuels****Tons/Year**

CHEROKEE COUNTY

2014 (Cherokee County 2014)

Total for year: 2014

Date of Model Run: Dec 05 09:58:07: 2007

Today's Date: 12/5/2007

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---

FIPS	County	Vapor Displacement VOC	Spillage VOC	Hot Soak VOC	Running Loss VOC	Tank Permeation VOC	Hose Permeation VOC	Total VOC
45021	Cherokee County	2.44	9.01	1.56	4.53	13.28	40.72	196.30
<b>Totals:</b>		<b>2.44</b>	<b>9.01</b>	<b>1.56</b>	<b>4.53</b>	<b>13.28</b>	<b>40.72</b>	<b>196.30</b>

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**ATTACHMENT F**

**NOTICE OF GENERAL PUBLIC INTEREST PUBLISHED IN THE  
SOUTH CAROLINA *STATE REGISTER* ON FEBRUARY 23, 2007**

**State Register Notice of General Public Interest  
Published in the State Register on February 23, 2007**

**DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
CHAPTER 61**

Statutory Authority: 1976 Code Section 48-1-10, *et seq.*

**NOTICE OF PROPOSED AMENDMENT TO THE  
SOUTH CAROLINA AIR QUALITY IMPLEMENTATION PLAN**

**CHEROKEE COUNTY, SC  
8-HOUR OZONE NAAQS MAINTENANCE PLAN**

***South Carolina Air Quality Implementation Plan:***

The Department of Health and Environmental Control (Department) proposes to amend the *South Carolina Air Quality Implementation Plan*, also known as the State Implementation Plan, or SIP. Interested persons are invited to present their views in writing to Dennis Camit; Division of Air Planning, Development and Outreach; Bureau of Air Quality; 2600 Bull Street; Columbia, SC 29201. Comments may also be submitted via email to [camitdr@dhec.sc.gov](mailto:camitdr@dhec.sc.gov). To be considered, comments must be received no later than 5:00 p.m. on Monday, March 26, 2007, the close of the drafting comment period.

**Synopsis:**

In a *Federal Register* (FR) notice published on July 18, 1997 (62 FR 38856), the United States Environmental Protection Agency (EPA), promulgated amendments to the National Ambient Air Quality Standards (NAAQS) for ozone. Based on its review of available scientific evidence linking exposures to ambient ozone to adverse health and welfare effects at levels allowed by the 1-hour ozone standards, the EPA replaced the 1-hour primary standard with an 8-hour standard at a level of 0.08 ppm based on the 3-year average of the annual fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area. The 1-hour secondary standard was also replaced by an 8-hour secondary standard identical to the new primary standard. On April 30, 2004, (69 FR 23858), the EPA designated and classified Cherokee County, South Carolina as an unclassifiable/attainment area for the 8-hour ozone NAAQS. Cherokee County, South Carolina is currently a maintenance area for the 1-hour ozone standard. Phase 1 of the 8-hour ozone implementation rule mandates that the State submit, in accordance with section 110(a)(1) of the CAA, an updated maintenance plan for any area initially designated attainment for the 8-hour NAAQS while subject to a maintenance plan for the 1-hour NAAQS at the time of designation for the 8-hour NAAQS. The maintenance plan must provide for continued maintenance of the 8-hour NAAQS for 10 years following designation and must include contingency measures.

**ATTACHMENT G**

**NOTICE TO AMEND AIR QUALITY STATE IMPLEMENTATION  
PLAN PUBLISHED IN THE SOUTH CAROLINA *STATE REGISTER*  
ON OCTOBER 26, 2007**

**State Register Notice to Amend Air Quality State Implementation Plan Published in the South Carolina  
State Register on October 26, 2007**

**DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
PUBLIC NOTICE  
NOTICE TO AMEND AIR QUALITY STATE IMPLEMENTATION PLAN**

Statutory Authority: S.C. Code Section 48-1-10, *et seq.*

The Department is proposing to amend the State Implementation Plan (SIP) to meet obligations of the United States Environmental Protection Agency (EPA). Interested persons are invited to present their views in writing to Anthony Lofton, Regulatory Development Section, Bureau of Air Quality, 2600 Bull Street, Columbia, SC 29201. To be considered, comments must be received by November 26, 2007, the close of the drafting comment period. To receive a copy of the proposed revisions to the SIP, please contact Mr. Lofton at (803) 898-7217 or [loftonat@dhec.sc.gov](mailto:loftonat@dhec.sc.gov). The Department is also conducting a public hearing on this issue. The hearing will be held on November 27, 2007, at 10:00 a.m. in room 3141 (Wallace Room) of the Sims Building, 2600 Bull Street, Columbia, South Carolina. The public is invited to attend.

**Synopsis:**

In a *Federal Register* (FR) notice published on July 18, 1997 (62 FR 38856), the United States Environmental Protection Agency (EPA) promulgated amendments to the National Ambient Air Quality Standards (NAAQS) for ozone. Based on its review of available scientific evidence linking exposures to ambient ozone to adverse health and welfare effects at levels allowed by the 1-hour ozone standards, the EPA replaced the 1-hour primary standard with an 8-hour standard at a level of 0.08 ppm based on the 3-year average of the annual fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area. The 1-hour secondary standard was also replaced by an 8-hour secondary standard identical to the new primary standard. On April 30, 2004 (69 FR 23858), the EPA designated and classified Cherokee County, South Carolina, as an unclassifiable/attainment area for the 8-hour ozone NAAQS. Cherokee County is currently a maintenance area for the 1-hour ozone standard. Phase 1 of the 8-hour ozone implementation rule mandates that the State submit, in accordance with Section 110(a)(1) of the Clean Air Act (CAA), an updated maintenance plan for any area initially designated attainment for the 8-hour NAAQS that was subject to a maintenance plan for the 1-hour NAAQS at the time of designation for the 8-hour NAAQS. The maintenance plan must provide for continued maintenance of the 8-hour NAAQS for ten years following designation and must include contingency measures.

The Department proposes to amend the SIP to address the requirements of Section 110(a)(1) of the CAA.

**ATTACHMENT H**

**EPA AQS MONITORING DATA FOR OZONE**

**STANDARD IN CHEROKEE COUNTY FROM 2004-2006**

UNITES STATES ENVIRONMENTAL PROTECTION AGENCY

User ID: FJA

QUICKLOOK CRITERIA PARAMETERS

Report Request ID: 484743

Report Code: AMP450

Nov. 27, 2007

Tribal	GEOGRAPHIC SELECTIONS														
	State	County	Site	Parameter	POC	City	AQCR	UAR	MSA	CMSA	EPA	Method	Duration	Begin Date	End Date
											Region				
	45	021	0002	44201										2004	2006

SELECTED OPTIONS				SORT ORDER	
Option Type	Option Value			Order	Column
EVENTS PROCESSING	EXCLUDE REGIONALLY CONCURRED EVENTS			1	PARAMETER_CODE
MERGE PDF FILES	YES			2	STATE_CODE
				3	COUNTY_CODE
				4	SITE_ID
				5	POC
				6	DATES
				7	EDT_ID

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
AIR QUALITY SYSTEM  
QUICK LOOK REPORT (AMP430)

Nov. 27, 2007

EXCEPTIONAL DATA TYPES

EDT	DESCRIPTION
0	NO EVENTS
1	EVENTS EXCLUDED
2	EVENTS INCLUDED
3	EXCEPTIONAL EVENTS EXCLUDED
4	NATURAL EVENTS EXCLUDED
5	EVENTS WITH CONCURRENCE EXCLUDED
6	EXCEPTIONAL EVENTS WITH CONCURRENCE EXCLUDED
7	NATURAL EVENTS WITH CONCURRENCE EXCLUDED

Note: The \* indicates that the mean does  
not satisfy summary criteria.

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AIR QUALITY SYSTEM  
QUICK LOOK REPORT (AMP450)

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Ozone (44201)

South Carolina

Parts per million (007)

1-HOUR																	
SITE ID	F O C	PQAO	CITY	COUNTY	ADDRESS	YEAR	METH	MEAS	VALID DAYS	NUM DAYS	1ST MAX	2ND MAX	3RD MAX	4TH MAX	DAY MAX>=	EST DAYS>=	MISS DAYS<
									REQ	1-HR	1-HR	1-HR	1-HR	0.125	.125	0.125	CERT EDT
45-021-0002	1	0971	Not in a city	Cherokee	MOGINNIS ROAD (OLD SC 110)	2004	047	214	214	.082	.082	.081	.081	0	0.0	0	Y 0
45-021-0002	1	0971	Not in a city	Cherokee	MOGINNIS ROAD (OLD SC 110)	2005	047	213	214	.100	.094	.091	.090	0	0.0	1	Y 0
45-021-0002	1	0971	Not in a city	Cherokee	MOGINNIS ROAD (OLD SC 110)	2006	047	212	214	.107	.089	.087	.087	0	0.0	2	0

Note: The \* indicates that the mean does not satisfy summary criteria.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
AIR QUALITY SYSTEM  
QUICK LOOK REPORT (AMF450)

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Ozone (44201)

South Carolina

Parts per million (ppm)

8-HOUR																
SITE ID	F O C	FQAO	CITY	COUNTY	ADDRESS	YEAR	METH	NOBS	VALID	NUM	1ST	2ND	3RD	4TH	DAY MAX	CERT EDT
									DAYS	DAYS	MAX	MAX	MAX	MAX		
									MEAS	REQ	8-HR	8-HR	8-HR	8-HR	0.085	
45-021-0002	1	0971	Not in a city	Cherokee	MCGINNIS ROAD (OLD SC 110)	2004	047	100	213	214	.075	.073	.070	.068	0	Y 0
45-021-0002	1	0971	Not in a city	Cherokee	MCGINNIS ROAD (OLD SC 110)	2005	047	99	212	214	.082	.080	.079	.078	0	Y 0
45-021-0002	1	0971	Not in a city	Cherokee	MCGINNIS ROAD (OLD SC 110)	2006	047	98	210	214	.090	.081	.079	.076	1	0

Note: The \* indicates that the mean does  
not satisfy summary criteria.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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METHODS USED IN THIS REPORT

PARAMETER	METHOD CODE	COLLECTION METHOD	ANALYSIS METHOD
44201	047	INSTRUMENTAL	ULTRA VIOLET

Note: The \* indicates that the mean does  
not satisfy summary criteria.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
AIR QUALITY SYSTEM  
QUICK LOOK REPORT (AMF450)

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PQAOs USED IN THIS REPORT

PQAO	AGENCY DESCRIPTION
0971	South Carolina Department Health And Environmental Control

Note: The \* indicates that the mean does  
not satisfy summary criteria.

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**ATTACHMENT I**  
**COPY OF LEGAL AUTHORITY**

## LEGAL AUTHORITY<sup>1</sup>

No plan for attaining a goal, the attainment of which is dependent upon regulatory action, can be used with any degree

of effectiveness unless the legal framework is strong. Consequently, the Requirements for Preparation, Adoption, and Submittal of Implementation Plans, 40 CFR 51, as amended, define the necessary statutory powers which must be immediately available to states to carry out the responsibility to the Clean Air Act.

40 CFR 51.230 sets forth six specific requirements for State authority. The South Carolina Pollution Control Act, Act 1157 of 1970, as amended, S. C. Code Sections 48-1-10 thru - 350 (1976), provides the State's authority to respond to these requirements. The Attorney General of the State of South Carolina has given an opinion as to the adequacy of South Carolina laws, as follows:

<b>Legal Authority Required 40 CFR 51</b>	<b>Adequacy of S. C. Law</b>	<b>S. C. Statutes Involved</b>
(a) "Adopt emission standards and limitations and any other measures necessary for attainment and maintenance of national standards."	Adequate	S. C. Code Secs. 48-1-20, 48-1-50(23)
(b) "Enforce applicable laws, regulations, & standards, and seek injunctive relief."	Adequate	S. C. Code Sec. 48-1-50(1), (3), (4), (5), (11); Secs. 48-1-120, 48-1-130, 48-1-210, 48-1-320, 48-1-330.
(c) "Abate pollutant emissions on an emergency basis to prevent substantial endangerment to the health of persons, i.e., authority comparable to that available to the Administrator under section 305 of the Act."	Adequate	S. C. Code Sec. 48-1-290.
(d) "Prevent construction, modification, or operation of a facility, building, structure, or installation, or combination thereof, which directly or indirectly results or may result in emissions of any air pollutant at any location which will prevent the attainment or maintenance of a national standard."	Adequate	S. C. Code Sec. 48-1-50(5), (10); Secs. 48-1-100, 48-1-110.
(e) "Obtain Information necessary to determine whether air pollution sources are in compliance with applicable laws, regulations, and standards, Including authority to require recordkeeping and to make inspections and conduct tests of air pollution sources."	Adequate	S. C. Code Sec. 48-1-50(10), (20), (22), (24).
(f) "Require owners or operators of stationary sources to install, maintain, and use emission monitoring devices and to make periodic reports to the State on the nature and amounts of emissions from such stationary sources; also authority for the State to make such data available to the public as reported and as correlated with any applicable emission standards or limitations."	Adequate	S. C. Code Secs. 48-1-50(22), 48-1-270.

<sup>1</sup> Section 2 of the EPA-approved South Carolina Air Quality Implementation Plan (SIP), which defines the State's statutory powers as required in 40 CFR 51.230.

## **Public Hearings**

The South Carolina Pollution Control Act provides for notice and public hearings prior to action by the Board of Health and Environmental Control concerning adoption of regulations and standards, adoption or modification of final compliance dates, and other specified legal actions.

Additionally, Act 176 of 1977 enacted by the South Carolina General Assembly requires, among other things, that at least thirty days public notice be given before adoption, amendment or repeal of any rule. It also requires that the substance of the intended action or a description of the subjects and issues involved be made known. While this act escapes the actual requirement for a public hearing in each case, the two Acts taken together do impose the requirement of a thirty days notice of public hearing, assuring compliance with the requirements of 40 CFR 51.102 as amended.

## **Public Availability of Information**

The South Carolina Pollution Control Act provides for the public availability of any records, report or information obtained under the provisions of the Act. However, upon a showing satisfactory to the Department that records, reports or information, other than effluent or emission data, if made public would divulge methods or processes entitled to protection as trade secrets of the source, the Department shall consider such data confidential.

All source data are kept on file at the offices of the Bureau of Air Quality Control, Department of Health and Environmental Control, 2600 Bull Street, Columbia, South Carolina, and are available to the public at this location, Monday through Friday, between the hours of 8:30 a.m. and 5:00 p.m. Such data are retained in the Permit, Source Test, and Emission Inventory Files.

The files contain information as to the source emissions, and these emissions are depicted in comparison to the applicable emission standards or limitations as stated in the Air Pollution Control Regulations and Standards for the State of South Carolina.